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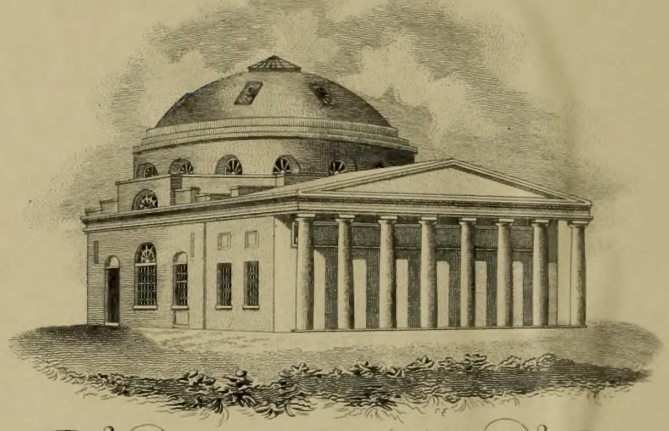

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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UNIVERSITY OF MARYLAND

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1850 (b)

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Purnell, James B. R.	Typhoid Fever
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UNIVERSITY OF MARYLAND

THESES

1850(b)

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An

Inaugural Dissertation
On

Vis Medicatrix Naturae
And
Clinical Medicine

Submitted to the Examination

of the

Provosts. Regents and Faculty of Physic

of the

University of Maryland
for the

Degree of Doctor of Medicine

By Geo W. Truitt
of Penna

1850

1 Mp
1889 6

To

Drs Smith and Power, is this production respectfully, inscribed, as a mark of respect, and esteem, for their valuable services, and instruction, rendered to the author, during his attendance here.

By the Author

Gentlemen of the Faculty

Since in the course of Medical events, it becomes of the utmost importance, and value to myself, as a Medical Student, of the Old, and time honoured institution, of the University of Maryland; as a candidate for graduation, at the ensuing examination; and in compliance, with established rules, to pen a few, of his general ideas & opinions, on some subject connected with Medicine; I therefore submit for your consideration, the following Inaugural Dissertation, on Vis. Medicatrix Naturae; with a few remarks, on the subject, of Clinical Medicine; intended to exhibit, to those most interested, the advantages, to be derived therefrom. I am aware this is a subject difficult to understand; nor do I pretend to give any opinion, but those who are my superiors in years, as well as Medicine, upon this subject; and this, in the hands of the empiric, has done, & is doing, a vast amount of injury, to the public

ing, a vast amount of injury, to the public at large, as well as, to the Medical proffession; and this with the thousandth part, of a grain of some article, to give it the semblance of medicine, (the patient believeing it to be such,) constitute their treatment.

The world, may be considered, as one gre at storehouse, in which, human beings, have been placed, to enjoy, to look with wonder & amazement, and to praise, with a grateful heart, the Author of all this goodness, to humanity. But no, the first inclinations of Nature, is to gratify the sensual appetite, and neglect the notice and study, of things more important; barely satisfied, with the pleasure, of enjoying them; the beauties of Nature having but little charms, for any person, taken up, in obviateing, the wants of the day, and anxious, for precarious subsistence.

But when we for a moment, cast a birds eye view, around upon the different varieties

or classes of animals, contained herein; & examine their strength; their beauty, or their structure, we shall discover man, to have, most of those different qualities, centred in him, which they, posses, only partially; &, much superior to all others, in knowledge and understanding; He is also above, and superior to them, in his form, and proportions.

Although, Nature has given him, the most extensive intellects to command; and has also provided him, with a body, fitted for obedience; and moreover if he has at any time, abused or despoiled his constitution, she has provided him, through her inexhaustable resources, with the necessary remedies, which abound, &, grow in abundance, in all parts of the Universe; and in addition to this, there is a natural diathesis, resident, in the human being, the same diathesis, being resident also, in the brute creation, with a tendency to renew or renovate, all the healthy functions, of the system, to their proper sphere

again, if not prevented, by a to officious interference; but assisted, by the hand, of the careful, and prudent practitioner.

Among the many agents, which she employs, in counteracting disease; I have selected, a few of the following, for your perusal, if you think proper. I have only time, to speak a few words, upon the leading features of each, as they severally, present themselves, to our view; the first of these then being Cold, in all its various forms, either as air, or water, the former Cold air, is when dry, considered pure and healthy; it being adapted, to a certain class of diseased individuals, who would be perniciously affected, by a warm and moist atmosphere, as is the case, with a consumptive patient; In the winter, especially, when the air is cool, dry, and pure, he feels tolerably well, especially if he take exercise in the open air; but he dreads the approach, of spring, as man does, the approach of an enemy, who he knows, he cannot avoid or escape; and well he may, for with its approach, come

mences his rapid strides, down towards the grave. the nept form in which, she uses cold, is Cold Water, this being used in various forms, depending, on the different peculiarities, of the patient, some improving under it, in the form of drink, some by bathing, some by the cold douche, and others by the cold sponging, which last, is very beneficial to health; but it is neccesary, in using this remedy of Nature, to be exceedingly, forbidding the patient, if he be weak, to persist in employing it to long, it being requisite, for reaction to come on, in all cases, after using it, if not, it is very liable to be fatal, in almost every instance.
This is a remedy, which a certain class of men employ, in all cases, wether the patient be sthenic, or asthenic, it being of no consequence to them, they not being, the suffering party.

There are instances on record in which a drink, of pure cold water, has saved the life, of many a poor, and wretched individual, who would otherwise have died.

And we likewise see Nature, asserting her supremity, in spite of the numerous obstacles, with which she is surrounded; for example, we see it beautifully, illustrated upon the introduction, of the cooling treatment, in all febrile diseases, where formerly, they used, the hot stimulating treatments.

Before the introduction, of the cooling regimen, the following instance occured; a patient, lying dangerously ill, of the Small Pox; the usual hot treatment, having been employed, he became delirious, and at last sunk away, into a comatose condition, but as the friends, and attendants, thought, had given up the ghost, under that impression, he was laid out, on the cooling board, with nothing thrown over him, but a thin sheet; and as a necessary consequence, the body being exposed, to the cool and refreshing air, he revived, and in a few days, was walking about in perfect health.

Heat is also a very important, and valuable remedy, in certain cases which require, that the pores of the system, should be opened, to throw off the offending matter, which accumulates in the body, when diseased; Nature in such cases resorts, to the warm stimulating treatment, for the purpose, of inducing, a copious perspiration.
It like Cold, has its various forms of exhibition, suited to each, particular subject.
Connected with this article, there is, an interesting phoenomena, namely, the temperature of the human body, maintained, at an average of ninety eight degrees, under all climes, and seasons, having so far, eluded the researches, of all physiologists; reserved perchance, for the present generation, to elucidate.
But if for a moment, we transport ourselves, to the bloody, and deserted battle field; or where the patient is deprived, of all human aid, then it is, we behold, her wonderworking power; for instance, the poor

soldier receives, what we might call, a mo
rtal wound; under some circumstances;
that is, the laceration, or division, of some
large bloodvessel, which, if not secured by art,
would prove fatal, if not arrested, by Natures
proces; that proces, consisting principally, in
coagulation, rest, position of the body, and her
peculiar structure, of the coats, of the arteries; the
coagulation, being ascribed, to the innumberl
es ruptures, of the inner coats, of the arteries;
forming numerous ragged edges, which impe
de, the flow of blood gradually, untill the coa
gula, is formed; but added to this, is rest, & position,
which occupy, a very important part, in this fo
rmation; the position advisable, being the hori
zontal one, causing the circulation, to be equal,
in all parts; rest too, we all know, the impor
tance of; in such cases, it being caused by Natu
re, to accomplish her ends; we may also obser
ve its importance, in wounds, or serious dise
ases, of the vital organs; where it is impossi
ble, for the Physcian, to accomplish any thi
ing; it is illustrated in an instance, where

a part of the brain, has been carried away, wh
ere the stomach has been wounded, and wh
ere cavities, have formed in the lungs, either by
a wound, or disease; all spontaneously recove
ring their health again, a case illustrative
of this, has fallen under my own eye, during
last summer, wherein the lung, was penetr
ated, by a dirk knife, and the case was pro
nounced, a hopeless one, by an intelligent
Physician, of this city; this patient ~~was~~ was
tapped, once or twice, and a quantity of matter
discharged from the lung, the external wound
has been closed up for a considerable time,
and the patient is at present, walking abo
ut, the same as before; but is not as strong as
usual; even now I am unable to say, wether
she has accomplished a complete cure; but gra
nting she has not, she certainly has accompli
shed wonders, in having saved him from deaths
jaws, up to the present time, for life is swe
et to all, as well to the poor, as to the rich.
There is always a tendency of Nature, to throw off
thes effete matter, in some form, and a not un

common one is by abscefs, presenting eternally. There is also a peculiar substance, thrown out in wounds or sores, called lymph, which becomes organised, similar to other healthy tissue; this being her method, of healing parts, whose continuity has been destroyed.

But it is in natural labour, that we meet with the most important, and beautiful part, which she performs, in delivering a human being, into this world, safe and sound, and we see the necessity of this, in cases, when the female is deprived of all human aid, when she is taken very suddenly, and is unable to send for help: The principle manner, in which she performs this procefs, is by, and principally through, the contractions of the uterus; which place the foetus, in the proper position, for coming through the pelvis, and expelling it therefrom.

This subject, (Nature) may be considered, as the foundation of medicine, and which may have led, those of ancients times, to examine into, and watch with interest, their different procefses, and course, in connection with disease, and their diff

erent modes of operating, in perfecting a cure; and in observing, some of those cases, in which she becomes embarrased, or retarded, in her efforts; they first conceived the idea, of coming to the aid, and afsistance, of Nature, by administering to her subject, something analagous, to her own manner of proceeding; but a little different & under certain circumstances, more applicable to the complaint, than to leave her to accomplish the cure alone; which probably, would have taken, a greater length of time, to accomplish.

It is the opinion, of wiser head than mine own, that close observation, has done more, for the science of medicine, than centuries of theory; It was close observation, which led Harvey, to discover, the circulation of the blood; and which led Sydenham, to adopt the cooling regimen, in all febrile diseases, and which has been, of such a vast amount of benefit, to the human family; The great secret, of Sydenhams sucess, was, as he has said himself, owing, to leaving nature, to accomplish her work, in her own

way, and manner, for says he, Nature, if left to herself, does her work, in her own time, and expels, the offending matter, in the right way. It was through close observation, and application, that Jenner, discovered, and brought into use, that great remedy, (vaccination,) as a modification, or preventative, of Smallpox.

And now, gentlemen, I have here given you, a few of my ideas on this subject, which I have gathered, from the gleanings, of the most experienced authors, during the short time, I have been sitting, under your instruction, and which I know, in the hands, of a more experienced and talented person than myself, would have been a masterly production; but I do not as yet, belong to that class of individuals, but hope to be, at a future day: I here therefore leave the subject, for your consideration, hoping you will not, cast upon it, a critics eye; but remember who is the author, and what he wishes to be, by your permission; But after all, in the majority of cases, she requires, the assistance of her son, to perform cures.

But the bis a Tergo, is always the great first cause, without whom, nothing can be done

Clinical Medicine

Having concluded my observations, on Vis Medicatrix Naturae; I here wish to make a few remarks, on Clinical Medicine, which is a branch, that is all important, to the student; for here, it is the pastical part of medicine, with which, he is to deal entirely; he can learn more here, by traversing, the wards of the Hospital, with his instructor, and by observing, every disease closely, than he can, by years of, theory; it learns us, to inquire, at the beds side, into the true nature of the case, into the symptoms, which present themselves to us, and to watch, their course, and termination, and to observe the effects, of the different plans, of treatment, to which they are submitted. From this course of observation, we see the situation of individual cases; theory being only sufficient, to make us acquainted, with species. Clinics therefore demand close observation; it is in truth the same as experience; How much farther Medicine, would have been advanced, and from how many errors, would it have been rescued, if public learning, would have

followed, this course of treatment; so that the student, would not have received any, but true impressions, and clear ideas, of the symtoms, of disease, and gathered a practical experience, of the application, of those rules, and precepts, which theory, lays down always undefined.

To the great Hippocrates, belongs the honour, of having first introduced, this branch of Medicine, to the human family.

Hospitals in their first origin, was intended rather to show, the charity, of the early Christians; than of perfecting the student, in medicine. It is said, the school of Alexandria, was held, in such high estimation, that a careful attendance, upon its lessons, entitled the student, to persue, the practice of Medicine, without any further license, than public opinion: And it is believed, by every intelligent person, that it has alleviated, a considerable amount, of suffering, while on the other hand, it has done wonders, for the student.

This branch has advanced, and receded, to advance again, and again, under different generations; those appearing, to take most interest in it, being the Greek, and German practitioners, and lately the French, have become interested in it, having enforced rules, ensuring its accomplishment, in which, she has been imitated, by our own happy country; believeing in time, she will stand, at the head of it, as she does in other things, although, not three fourths of a century, old.

The benefits, arising from this branch, are unappreciated by the student, until he takes pleasure, in examining for himself, into every minute particular, the case presents, to his inquiring mind; being a satisfaction to himself, to know, there is a remedy, for its cure, and that it lies in his power, to administer, that remedy, in the proper time, and manner.

Yours Geo W Smith

1850

An
Inaugural Dissertation
On

OLEUM TEREBIN.E

Submitted to the examination of the Provost, Regents
and
Faculty of Physic
of the
University of Maryland
For the degree of
Doctor in Medicine
By

Sam.l P. Brown.
Of Virginia

1850.

In compliance with one of the existing laws of this institution, making it obligatory upon every candidate for the degree of M.D. to compose a medical thesis, I propose a short disquisition upon the nature and effects of the Oleum Terebinthinae as a remedial agent both in local and general diseases. I do not flatter myself that I shall offer much useful novelty respecting this medicine; nor can I pretend to any extended experience in its use or administration. To lectures and authors and some little participation in a country and village practice, I must ascribe all that I shall herein state of the diversity of symptoms and diseases, to which, in my opinion, it is mainly applicable. First then I shall speak of it in its Botanical and Chemical character, then treat of the remainder after the manner and usual style of most of the Dispensatories and works on the Materia Medica.

The oil of Turpentine, more commonly called the spirit of turpentine is obtained from many different kinds of pines, among them the Pinus palustris, the Pinus taeda, the Pinus sylvestris, Balsama Larix and others.

but in the United States, the Pinus palustris and Taeda furnish by far the largest portion both for commercial and medical purposes. A particular kind of this tree is found abundantly in old Virginia, upon lands that have been exhausted by cultivation, which has received the almost universal appellation of the old field pine. Its worth either for its juices or its lumber is comparatively nothing; Its growth is remarkably dense and doubtless tends to resuscitate the lands by its deep shading. One singular fact in regard to it is, that if a single tree be felled in the months of August or September and left upon the ground, it will in the course of a short period cause the death of the whole forest. This fact is not generally known, except to Virginians, and it is not unfrequently the case that Strangers express their doubts as to its truth.

"The forests of pine growth, which range along the eastern shore of North Carolina and which are likewise found in large tracts even in the Central portions of the State, furnish a source of vast revenue to her Citizens. It is their custom to make free incisions in the tree in the

early part of March and the turpentine flows freely till the end of October. Boxes are so placed as to receive the drippings, which are emptied from time to time as they fill, which amounts frequently to six or seven times during the season. From these drippings or drainings, the oil is obtained by distillation the oil passing over and leaving a residue called rosin. As to the production of Tar and Pitch, its management &c, it would be irrelevant, in my opinion, here to speak, as I purpose to confine my view solely to the single article of the oil.

There has been some difference of opinion among Chemists of equal celebrity respecting the chemical composition of this article. Dr. Ure, the renowned professor of Glasgow, maintained that it consisted of 14 equivalents of carbon, one of Oxygen and ten of hydrogen. Labillardiere, on the contrary, asserted that the really pure oil, contained no oxygen, but was composed of Carbon and hydrogen in such proportions, that one volume of its vapor, contained four volumes of olefiant gas and two volumes of the vapor of carbon. All must agree however to the fact that it is in the strictest sense of the word, a volatile or essential oil, that when free from impurities, it is limpid and colourless, leaves no residue, when distilled & yields a dense white light in burning. Its boiling point is said to range between 280° and 320°

a minute portion of Succinic acid passes over with the oil in distillation. From experiments it appears that some of the liquid turpentines like Copaiba may be solidified by the addition of magnesia. This oil becomes impure by exposure in consequence of the absorption of Oxygen and the production of resins. From this it may be freed by distillation or by the agency of alcohol. The process for distilling is attended with some inconvenience, in consequence of the great inflammability of the vapor and its rapid formation, which causes the liquid to boil over. In hot alcohol it dissolves without difficulty, but on suffering it to cool again separates. It is completely soluble in six parts of sulphuric aether, unites with sulphur, wax, resins, and balsams, when exposed to a gentle heat. The Alkalies have no action on it. After the foregoing very description of its botanical and chemical character, the next point to be treated of is its character as a remedial agent. Its powers as a diuretic and anthelmintic have been long known even among the unlearned; in proper doses these properties are manifested in an eminent degree. In medium doses – say from two scruples to a drachm – it will increase the frequency as well as fullness of the pulse, adding somewhat to the natural temperature of the surface, without

affecting very materially the cerebral functions. In larger doses
-say from four to twelve drachms- it causes a sense of fulness
about the head, vertigo or a feeling of intoxication, with some
degree of nausia, all of which symptoms, will subside upon free
purgation, which nearly always takes place upon the administra-
tion of such a dose. Among the many drugs, that admit of
hasty, and general absorption, the oil of turpentine stands
foremost, for whether given per orem or per annum, it soon
tells of its presence either in the breath, urine, perspiration
or in all. In fact it seems to diffuse itself throughout the
system as completely as the blood. The result most to be dreaded
from its too frequent administration, is an irritation of all the
urinary passages, amounting sometimes to violent strangury,
but is this not sometimes desirable in some ~~xxxx~~ diseases, where a
powerful remissive action is desirable? In the village near to which,
I reside, as well as its vicinity, where cases of intermittents are
numerous, it has become a part of the domestic practice, to exhibit
the oil of turpentine in half drachm doses, at intervals of
two or three hours, for the purpose of suppressing the regular
periodical paroxysms. Indeed it has there been used as a

substitute for Quinine, and notwithstanding the jeers and taunts of the profession upon its first introduction by a Tennessee quack, the results of its administration have been so uniformly beneficial that its use is still persisted in by the unprofessional, and it has to my knowledge been adopted by one if not more of the regular practitioners of the place. I do not believe that it will cure an intermittent sooner than Quinine, but I will venture the assertion that its cures are more permanent, because there are fewer relapses of the cases cured by it, than of those treated by Quinine. What can be its Modus Operandi in remedying this disease is not for me to say: That I will leave to some future theorist and speculator. In the yellow fevers of our Southern States, it is said, by writers on the subject, that turpentine has been for a long while in use. It seems to have been administered in doses of one drachm every two or three hours with the view of removing the sense of heat and irritation of the stomach and thereby subduing (to use the words of Dr. Chapman) "the force of vascular action and general excitement and inducing at once a condition of more comfort and security to the patient."

But it is in the low or typhoid forms of fever, that we must look for the most salutary, and yet to the common observer, the almost silent effects of this remedy. At the present day the concession is universally made, that the glands of Peyer and Brunner in typhoid fever, are always in a state of irritation, abrasion or ulceration, which is sometimes extended from these glands as centres over a greater or less surface of the mucous membrane. Wherever is the case, the tongue becomes very red and dry, frequently cracked and much stiffened, the skin becomes shrunken, and husky; the pulse diminishes in volume but increased in frequency, the bowels in a distended tympanitic state, with occasional slow delirium. In a disease presenting this aspect, are we to depend alone upon external applications— mustard, cantharides, &c. revulsives to overcome internal irritation or ulceration? I humbly conceive not and whilst I would by no means discard such applications, because they are valuable adjuvants, yet I would use another remedy calculated to reach more readily and directly the main seat and centre of morbid action. That remedy is the oil of turpentine. I would give it to an adult in doses from half to one drachm at intervals of two or three hours.

until the nature of the symptoms was entirely changed; at all events, till the tongue became moist and of a more healthy colour. The return of a furred coat even, over that organ would be preferable to a state of continued redness and dryness. I am aware that in thus speaking of the use of turpentine in this form of fever, I am in some degree, treading "on hallowed ground," for the lamented Eberle, whom I was taught from the earliest period of my Novitiate, to regard as the medical Samaliel of America, in his work on Therapeutics speaks nothing in its favour, but reminds the reader, that its use in low forms of fever is abandoned or rather that "it is seldom or never prescribed." Possibly this Samaliel, at whose feet I was not brought up, but at the feet of whose pupil I was- did not understand in his day and time the true pathology of typhoid fever, if he had been as far advanced in pathology as our first men at the present day, he certainly would have advocated its use in low forms of fever, with as much force and pertinacity, as he did the use of balsam Copaiva and this same oil of turpentine in chronic mucous enteritis. In the application of this remedy to chronic enteritis he says- and he never uttered a stronger truth- "Whatever may be the

conclusions of reason, experience, which is always our best instructor, teaches that Turpentine is often beneficial in this variety (chronic mucous enteritis) of intestinal phlogosis;" with the same propriety and with the same pertinacity, if I cannot command the same force of language or argumentative ability, in which I believe he was equalled by few and scarcely surpassed by any. I mean to maintain that turpentine, the oil of turpentine, possesses a most powerful efficacy in relieving the ulcerated, irritated and abraded glands of the human intestines. Nay I shall do more: adopting his memorable language as my own maxim, "That the American practitioner freed from the trammels of systems and the dogmas of the schools, pays no further regard to the Verba Magistri than is sanctioned by his own experience and observation," I intend, with the little amount of experience and observation I have to boast of, to continue the use of the oil of turpentine, in all low or typhoid cases, with symptoms as above described that may come under my care, notwithstanding its use has become obsolete and that now (when he wrote his work on Therapeutics) "it is seldom or never prescribed." In short if we admit the utility of this

article in its application to an inflamed skin from burning or scalding, because of its power to produce a peculiar excitement, which in certain states of inflamation is particularly salutary, with the same propriety I maintain that an ulceration inflamation or abrasion of the mucous membrane of the bowels, which is nothing more nor less than a continuation or prolongation of the skin of the surface, may require the same peculiar excitement, which so often proves beneficial in surface inflamations. nor is it its healthy action on those ulcerated glands alone which renders this remedy so beneficial in typhoid fever; It has been noticed that the urine, scanty, limpid, and colourless, in this disease, from its very inception, becomes still more so, as it approaches a fatal termination. now as the kidneys are the chief emunctories by which the effete matter of the system is disposed of, it is but reasonable to infer that a remedy, calculated to stimulate, those organs to a discharge of that function, the healthy performance of which is necessary to life, would be salutary. If this be true, then there is no better remedy than the oil of turpentine, in this disease. Apart from its local action

in low forms of fever, it must not be forgotten, that it exerts a happy influence on the pulse, increasing it in volume, whilst it does not greatly affect the brain, and sometimes unloads the bowels of their fœtid contents, without producing any corresponding prostration, such as is often consequent upon the action of other purgatives. Indeed when an aperient is absolutely indicated and there is the remotest suspicion of a tendency to prostration of the vital powers, Turpentine may be combined with castor oil or any other similarly mild cathartic, to answer the desired object. So far from adding to the disagreeable taste of the oil, it is said by those, who have taken the dose, actually to destroy, in a great measure, its naturally nauseating and greasy properties. In cases of flatulent colic, this combination, in my judgement, is most peculiarly applicable. Even in puerperal fevers, the oil of turpentine has obtained some celebrity, as a remedial agent. Dr Eberle, himself, speaks in no mean terms of praise, respecting its efficacy, when combined with oil, in fevers of this character. In epilepsy, particularly in that form depending upon verminous irritation, both

Dr. Paris and Dr. Latham, bear high testimony in its favour. Likewise in that species of the disease denominated the uterine epilepsy, it is supposed to be equally efficacious. Dr. Pritchard relates a case of this disease in a young lady twenty years of age, who had never menstruated and by this remedy, he succeeded in establishing the catamenial discharge and thereby arrested the disease. His plan was to administer one drachm twice daily, until strangury took place; and upon the subsidence of this symptom, the same dose was repeated, until a like effect was produced. This course in connection with bloodletting and an occasional hip bath, was persisted in for about five weeks, when the menses began to flow and the epileptic paroxysms ceased to return. Dr. Watson in his work on the Practice of Medicine, also speaks highly of its administration in this disease and says if he should be called on to name any single drug, from which in ordinary cases of epilepsy, he should most hope for relief, he would give the preference to the oil of turpentine. He does not recommend very large doses, but small ones frequently repeated, believing no doubt, that its

remedial powers do not depend more upon its anthelmintic properties, than upon its general constitutional influence. at all events he asserts that its power to expel worms is not the sole benefit to be derived from its exhibition.

In chorea this remedy is sometimes given with considerable benefit, especially in those cases dependant upon verminous irritation, in great and habitual torpor of the bowels; in which last case, it should be combined with castor oil, as that peculiar mixture tends more than any other aperient to remove long retained scybala. In a case of tetanus produced by a jagged missile causing many small punctures of the scalp, and dividing the occipital artery, I have myself seen the turpentine freely given together with a preparation of iron, but here its salutary effects were by no means manifested, for the patient would die. In chronic rheumatism, and more particularly in sciatica it has been used time out of mind, by every old man and woman afflicted with the disease in Central Virginia.

In neuralgia, which in the opinion of some, is allied both to rheumatism and intermittent fever, it has likewise been administered and much extolled for its good effects.

In a case of purpura haemorrhagica, consequent upon bilious pneumonia, which my preceptor, Dr. Miller, informed me was much neglected in the incipient stage, I witnessed in my last the happiest results from this drug: It was given in half drachm doses combined with ten drops of elixir vitriol, at intervals of four hours day and night, with a calomel and oil purge every forty eight hours. In less than twelve hours after the commencement of this course, a manifest abatement of the haemorrhage, which was from the nostrils, gums, throat and bowels, took place, and after the expiration of five days, not a vestige of the disease, except debility- not a spot or stain remained, I am further informed by my preceptor that in the course of his practice, he has met with some seven or eight cases of this truly alarming disease for the most part, the sequelae of fevers and other different maladies; and of the whole, only one proved fatal, and strange to tell, in that one alone, (being the first) the use of turpentine was omitted, notwithstanding the patient was under treatment for the space of nine or ten days.

In the latter stages of protracted gonorrhoea and in obstinate gleets, this remedy taken in some demulcent with copaiba

or some preparation of cubebs will more frequently than any other internal or general means, remove the ipse. It is a custom on the James River among the special quacks— I mean those who treat these peculiar diseases— to administer pills made of the concrete juice, just as it forms on the tree, always observing to provide the whitest, which they affirm, contains more virtue and acts with more potency in the relief of their distressed patients. This doubtless is quite a good as well as convenient practice, as the portion of rosin, which the turpentine contains, can not possibly exert any deleterious effect upon the disease or diminish in any degree the force and efficacy of the oil with which it is combined. In leucorrhœa, a complaint somewhat similar to the two last mentioned, it is said to be sometimes highly useful and will often cure when even the cantharides fails.

As a remedy for the tape worm (tænia) it stands at the present day in high repute. Its great power in removing this worst of all intestinal pests, was discovered in England about the beginning of the present century and for this purpose it is given in what I consider to be enormous doses:— from two to three ounces, but owing, no doubt to speedy catharsis, there is no record of its bad effects even in this quantity.

When used as an enema it is valuable in many different maladies. In colics, in flatulent, tympanitic states of the bowels, in removing ascarides and in hysteria, it has been resorted to as an enema in combination with some suitable vehicle, and pronounced of great service. As a rubefaciant, whether simple or compound, it will admit of almost universal application, since but few symptoms occur in any disease to contraindicate its use. In scalds and burns, requiring a certain degree of stimulus, it has for a long while been in use in this country; and it has sometimes been resorted to as a remedy for deafness, when mixed with oil and introduced into the ear upon a piece of wool. When applied to freshly incised wounds, which is frequently done by mechanics, who use edge tools, it will promote union by the first intention: an effect probably of its stimulus to the mouths of the divided vessels as well as to the incised surfaces of the muscular tissue.

There is a traditionary story amongst some of the mountainiers of western Virginia, that some years ago, an old hunter, whilst pursuing his avocation alone, was bitten by a rattlesnake and having nothing about him, but a vial of turpentine, he

immediately applied a few drops to the wound and drank off the remainder. He survived, came home and told the tale, and such was his character for veracity among his comrades, that they never afterwards went on a similar excursion, without being first prepared with the antidote. It may be truly said about all this tradition, "Is it fancy, or is it fact?" That question, I will not answer, but were I to be placed in the same situation in which poor Mainwright of New York was a few years ago, I for one would give the antidote, if it be one, a full, fair, free and fearless trial. When that great political Comet, the eccentric Randolph of Roanoke, more familiarly known in Virginia as Roanoke John, was asked by a friend how he ranked the books in the English language, he replied with his usual quaintness and precision— "The Bible first, Shakspear second, Æsop's fables third and Fieldings Tom Jones the fourth: If I were asked, how I ranked the articles, of the Materia medica. I should say, Mercury and its preparations first, Opium and its preparations second, Antimony and its preparations third and in the fourth place I would name Oleum Terebinthinæ, as the Tom Jones of the United States Dispensatory. To conclude:

I have thus given my views without any aim at terseness, but with some little attempt at conciseness of expression, upon one of the most simple articles of the materia medica; and I fear much that in some parts of them at least I have spoken with more confidence, if not with more zeal and fervor, than strictly became a novice—a mere tyro in the profession. I submit them, however, notwithstanding the nakedness of their defects, with all proper respect and with all due deference, to the candid and impartial consideration of the very able and learned medical faculty, of the University of Maryland

Sammel P. Brown

Note

In the use of turpentine and its proper adaptation to fevers of a typhoid type, a practitioner should study the constitutional diathesis or rather the idiosyncracies of his patient. He should be particular in ascertaining whether the remedy acted too freely on the skin, (a rare case) the kidneys or the bowels. If too freely upon the bowels, an astringent may be combined, or the dose diminished;

if too freely on the kidneys then it may be nescessary to administer it in larger doses or in combination with Oleum Ricini or even with Rhubarb and its preparations. Such aperients, when given with the spirit of turpentine, serve as dirigents and cause it to act locally upon any portion of the diseased surface of the mucous membrane of the intestinal tube. Its combination with Rheubarb may be singular, but I have seen it thus administered with the happiest results, notwithstanding the prejudices entertained by many against Rhubarb as a griping cathartic. I have likewise seen turpentine given in combination with small doses of calomel and oil, when there was great vitiation of the secretions in connexion with nervous, muscular and circulatory debility. I have never seen a formula for the combination of calomel and oil, but I know nothing either chemically or physiologically incompatible in the mixture, even if a portion of the pharmaceutic Tomjones were added thereto.

S. P. B.

1850

An Inaugural Dissertation

On

Intermittent Fever

Submitted to the examination

of

The Provost, Regents and faculty of Physic

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For

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Doctor of Medicine

By

Edgar W. Wood

of Maryland

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Intermittent Fever

Nothing so forcibly, as the works of medical men, remind us of the aphorisms of the Preacher, that, "there is no new thing under the sun", and that "all novelty is but oblivion". For when we imagine that we have discovered some new feature in a disease, or some property of a plant heretofore unknown, very probably the first time we open our books we find "that feature" or the "properties of that plant" clearly delineated ever since the times of the oldest medical writers - Thus, like an Alexander, casting our eyes over the vast extended field before us, we sigh to think that there is so little left for us to do - So, when the time comes for the student to write his Thesis, he must lay aside the hope, that it shall be something new and original, and turn his attention to what other men may have best described, or to that, with which he may be the most familiar - Then with this

Object in view I have determined to give a brief account of the Symptoms and treatment of Intermittent Fever, paying the most attention to what may be termed its simple form, since it is with this we have most to deal, and though less dangerous than when the disease assumes the congestive type, yet on account of its very frequent occurrence should demand more of the Physician's attention. And since the cause of this fever is still unknown, or rather is still the subject of speculation; for I believe that no one has as yet discovered any thing farther, than that there is a certain poison called Malaria, and that this poison seems to be the cause of intermittent fever, since then this is a question sub judice, I shall refer to it again only very briefly.

We can easily distinguish a case of this fever from all other forms of fever, indeed there is but one disease with which it is at all liable to be confounded. And it is only during the first paroxysm of Remittent Fever, that Physicians need

be uncertain about the case with which they have to deal, for the consecutive symptoms of the two diseases vary in many respects. Of these, it is only necessary to mention one, in order to diagnose between the two fevers, viz: the absence of all febrile move= ment, and almost the appearance of a return to health in the intermittent form, while on the other hand in the remittent the fever never entirely subsides, and the patient remains sick until the return of the second paroxysm.

The first indication of an approaching attack of this fever is a peculiar debility which shows itself sometimes hours before the regular chill, and at other times the more violent symp= toms follow in close succession. The patient feels a desire to stretch his limbs; he yawns very frequently; looses all appetite; slight chills creeping up the back; a sense of drowsiness and altogether he feels very unwell. These symp= toms gradually increase, the chilliness before felt only along the back becomes much more intense-

and extends over the whole body; and sometimes this increases to such a degree that he shakes the bed; his teeth chatter, and those standing by he presents a most pitiful condition. Now a headache, sometimes very severe, but generally a dull, heavy sensation is felt; together with pains in the back and loins. The patient generally complains of thirst. The blood leaves the superficial capillaries, and the internal organs, more particularly the bowels, become congested and enlarged. The hair bulbs become prominent, causing the skin to become rough, and from the resemblance, which it bears to that of a plucked goose, it has been termed the Cutis anserina. The nails and lips are blue. Respiration is embarrassed and quick, owing to internal engorgement; the pulse sometimes rapid and irregular, sometimes slow and generally very compressible; the mental faculties generally sluggish; all the secretions are diminished, the urine pale; the tongue mostly covered with white fur and pasty

but sometimes clean. These symptoms after continuing sometimes a half an hour and sometimes much longer, gradually subside, and the second or hot stage comes on. The capillaries resume their function, restoring the natural condition and color of the skin; the headache increases; the Carotids beat forcibly; the breathing hurried; the pulse full and strong, sometimes hard. This stage after continues for a longer or shorter period terminates in the last or sweating stage, with great relief to the suffering of the patient; as soon as a copious sweat breaks out all the disagreable symptoms almost immediately disappear, and the patient is left in a state of almost perfect health until the recurrence of the second paroxysm, when all the above mentioned symptoms again recur generally in a more violent degree. The period between the beginning of one paroxysm and the cold stage of the next is called an interval; the period between the sweating stage of one paroxysm & the cold stage of

the next is called an intermission.
Now according as these intermissions are long or short, or rather from the period which elapses between one chill and another, certain names have been given by medical men to the fever. When the paroxysm occurs every day, it has been called the quotidian ague; if on the third day, the second being a well day, the tertian; and when two well days intervene, or the chill occurring on the fourth day, the quartan. Besides, there are several modifications of the different types already mentioned; thus, authors speak of double quotidians, but these, I believe, seldom occur; but the double tertian, when we meet with a paroxysm every day, the paroxysm of the first day corresponding with that of the third, as also the double quartan, a paroxysm occurring on two succeeding days, leaving the third a well day, are more frequently noticed. But there are yet other peculiarities ~~in their~~ mode of occurrence. There may be a double tertian presenting on the first and third days two distinct

paroxysms; so also we have the double quartan in its regular days presenting the same phenomena. These have been called the duplicate to distinguish them from the former, or duplicates Sometimes these different forms run into each other, for instance, the tertian becomes the quotidian, and vice versâ; when the latter occurrence takes place, it shows that the fever is becoming more tractable; when the former happens, the prognosis should be more unfavourable. The paroxysms are said to anticipate when the chill occurs at an earlier hour, than on the preceding attack, and this too should be looked upon as an unfavourable omen; but when the paroxysms postpone, that is, when it occurs later and later at each succeeding attack, we may assume, that the disease will generally go on to terminate in health.

When the paroxysms of Intermittent Fever are incomplete, that is, when the three stages are not accurately marked, but only a slight chilliness, a

little increased heat, with some headache, or some disorder of other functions occurring at regular intervals, the patient is said to have a remittent ague.

Intermittent fever may occur at any period of the year, but we most often meet with it in the Autumn and Spring; those occurring in the Autumn, ceteris paribus, are the most likely to prove fatal, on account of it's being more apt at that period to assume the congestive form; though I believe that vernal agues more generally run a longer course and less subject to the specific influence of the Bark

Besides the regular symptoms already mentioned, as always, or most generally accompanying the paroxysms of this fever, we sometimes have more violent phenomena showing themselves; so that, not unfrequently during an attack, the patient becomes delerious; in some cases a temporary coma, though this most generally is an accompaniment of the congestive type; and sometimes mucus or bilious

indigestion annoys the patient greatly

It has been remarked, that Malaria, or the cause of the ague shows itself so constantly disposed to give a periodic action, that persons living under its influence, escaping from the disease itself, yet if they happen to be attacked with some other malady, in very many cases, it will assume a periodic form, all the symptoms increasing and subsiding at regular hours

On account of their greater exposure to its exciting causes, men are more liable than women to be attacked - And those predisposing causes are mental emotions, improper diet, exposure at night, and early in the morning to the open air, also exposure to the intense rays of a mid day sun; but the greatest of all causes, is an actual occurrence of the disease, for when it has once attacked a person, he is ever after upon the least imprudence subject to subsequent attacks

If these paroxysms are allowed to recur for a length of time, unfavourable sequelæ commence

to show themselves; the system becomes cachectic ; alterations take place in the alimentary canal ; the liver and Spleen, more particularly the latter, become very much enlarged and sometimes indurated; and on account of the thin condition of the blood, dropsies are of common occurrence

Sometimes it has happened that an attack of intermittent fever has proved beneficial by alleviating, or altogether removing some other more troublesome disease: thus, Chorea and Epilepsy have been known to disappear entirely after several severe ague fits, but this remedy has proved useful in such few cases, that it is but seldom, or never tried -

The traces of disease after death are confined principally to the liver and Spleen. These we find engorged with blood, and the Spleen is sometimes so much diseased, that it bursts while handling it, though in the liver we do not so constantly find this enlargement; yet we can account for death in no other way than by supposing, that together with the

lungs, these organs have become overdistended with blood—

The prognosis should generally be favourable unless, when occurring in very old and infirm subjects, or in persons afflicted with serious organic diseases; and it has been said, that those suffering from chronic maladies are more liable to take on periodic action, and this we might infer, a priori, from what was before said in reference to debility as an exciting cause

I come now to speak of the cause of intermittent fever, marsh miasm, or Malaria— The agencies, which seem most necessary for its formation are heat, moisture, a soil capable of absorbtion, and the decomposition of vegetable matter, though the last cause is often absent— It appears to be most abundantly disengaged during the latter part of August, and in September, after a rainy summer, or I should rather imagine, after a wet spring, followed by a summer of intense heat—

This poison is more pernicious during the night

, than the day; indeed it has been stated, that persons may live with impunity in an infected district, if they are careful to avoid the night air, and the fogs of morning. It shows a peculiar disposition to keep close to the earth, so that, persons living in the same house, but some sleeping in the upper story, and some on the ground floor, those of the former may be entirely exempt from an attack, while those of the ground floor may be subject to the disease in its most intense form. The wind seems to have the power of carrying it from the place of its origin to spots more remote, but a body of water appears to present a barrier to its farther passage, as also a belt of trees; whether or not the poison becomes absorbed by the water, is a question, which I am not prepared to answer; but this is certainly not the case with respect to the trees, for persons lying under these trees have been taken with a most violent chill after a very few hours, proving that the poison must be present in a free state. It has often

been the subject of remark in our neighbourhood (Prince Georges), which heretofore has been visited both by Remittent and Intermittent Fevers of the severest forms, it has been remarked I say, that since the Cholera of 1832, these diseases have become in comparison very rare; and when they do occur, assume very mild forms; so that we now often escape with a few chills, whereas persons then were thankful that they got through the bilious fever with their lives. Why is this? Can the poison of Asiatic Cholera be allied to the poison of Intermittent Fever? We know well enough that the poison of Small Pox has no effect in destroying that of Measles. Why then, if they be not allied, should we imagine that the separate poison of the Cholera should influence that of Intermittent Fever?

Having noticed the principal symptoms and characteristics of a simple form of this malady, together with the peculiarities of its supposed cause, I shall next call your attention to

its treatment, dividing the remedies and habitatives into those applicable to the cold stage, the fever stage, and to the specific used in the intermissions.

In the first, or cold stage we can do nothing more, than what our common sense would dictate. Put the patient to bed (I am now speaking of the disease as it most generally occurs in the Middle States); apply hot bricks to the feet, bottles of hot water to the abdomen; mustard plasters to the ankles, and if the chill be severe, along the spine; but the most comfortable thing to me in a chill, is for a person to lay on the bed so as to cover as much as possible the shoulders and lower extremities, the natural heat of the body dispelling more than artificial warmth the disagreable chilly feelings; these together with warm drinks, if the patient desires them, constitute all that can be done during the chill.

During the hot stage the patient may eat freely of pounded ice; Opium has been recom-

needed by some, as efficacious in checking the severity and duration of the fever; and also blood letting under certain circumstances, namely, a hard pulse with very severe pain in the head accompanied with throbbing of the temporal arteries; and I should have mentioned that blood has been taken in the cold stage with apparent advantage, but I should never for one moment think of a remedy so obviously dangerous — The sweating may be promoted by warm diluent drinks, and after it has lasted sufficiently long to dissipate all the preceding disagreable symptoms, it may be checked by changing the patients clothes, and setting him up out of bed —

Now these are only palliative means, they cannot of themselves remove the disease; it is during the intermissions that we must bring our remedies to bear upon it, then it is that we test the efficacy of the bark. But before speaking of the great indication for the use of the Specific

I shall notice other though far less powerful a-
gents. I noted, first, it was the practice of older
Physicians, remembering, I suppose, the precept
taught them, that we must first remove the
cause before we can remedy the effects, and
supposing that the cause was somewhere in
the liver or Intestinal Canal they either blue
pill, or gave large purgative doses of Calomel
before administering the Bark, I say that this
was the practice of the older Physicians, but ex-
perience has taught us that they were wrong, that
is under most circumstances
Again, Opium in large doses just before an expected
attack has been a very favourite practice with
some Physicians, though it does not sustain the
high reputation, which it once had, Opium in
combination with Quinine given just before an
expected chill has been known to prevent it
when all other remedies, even the Quinine (alone)
, have completely failed.
Salicin has proved very efficacious, also the bark

of the Cornus bribe, together with the different pre-
parations of Iron, Zinc and Copper. But were we
to mention all the medicines recommended
in Ague and Fever, we should have to com-
ment upon the most of the articles of the Ma-
teria Medica

The two articles next to be mentioned
require more your attention. I speak of Arsenic
and the Bark. Both I believe have gained the
appelation of Specifics; but if the powers of the for-
mer were equal to those of the latter, yet it can
never rank so high as a cure. The greatest ad-
mirers of its virtues must acknowledge that
it is a most violent poison, and though under
its use scarcely one in ten thousand may be poison-
ed, yet even that possibility precludes it from
the praise, which it might otherwise claim
. I do not pretend to say, but that there are
cases which demand its administration.
When the Bark fails to remove the disease, it has
been found, that Arsenic acts most favorably

, and these are the only cases, in which, I would recommend the remedy - When it is found necessary to administer it, it should be given in Solution - Five minims of Fowlers solution four times a day is as much as I should venture upon, at least, in the commencement of its use -

Now, the best possesses in most cases all the good qualities of Arsenic in removing the disease, with none of its dangers. It is to this we trust; this has been the cause of changing one of the most unmanageable forms of fever into one of the simplest and mildest with which the Physician has to deal - It was formerly given in substance; now, the Sulphate is almost the only preparation used

We should commence giving it as soon as the sweating stage goes off, and continued until after the time of the expected attack. This is the practice generally followed. Some authors have recommended, that it should be given in one large dose just beyon the chill

, but the other is the best mode. Sometimes the Sulphate fails to effect a cure, and the Bark in substance may act very well. If the stomach be too irritable to retain it an enema has often had an excellent effect. In combination with Elixir Vitriol in the following proportion it has been highly recommended... ℞ Sul. Quinine, Elix. Vit ...āā 72 grs. When the disease is accompanied with much hepatic derangement, quinine is greatly aided by being united with Calomel. The following is a very good prescription.. ℞ Quinine..3 to 5 grs, Calomel.. ½ gr; to be given according to the urgency of the case. After the chills have been checked the quinine should be continued for a longer or shorter time, as the symptoms may demand. It is the custom with us to give a purgative after the disease has been arrested by the Quinine, that being the primary object (to arrest the chills)

It only remains for me to notice some of the Hygienic means necessary after a person has

—

been attacked with Ague and Fever. He should if possible, leave the infected district. Let him go to the Sulphur Springs. But if he is compelled to remain at home; he should clothe himself warmly, avoid all exposure, especially at night and early in the morning; "he should avoid over fatigue, and exhaustion"; he should sleep in an upper story and have a plenty of good wholesome food. These, I believe, are the principal means to be resorted to in a case of Intermittent Fever.

An

Inaugural Dissertation

on

Typhoid Fever

Submitted to the examination

of the

Provost Regents and Faculty of Physic

of the

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for the degree of

Doctor of Medicine

by

James B R Purnell

of

Maryland

1850.

Typhoid Fever.

Typhoid fever is quite a common affection, and like the most of diseases, presents many varieties in its character and appearances. It is the endemic fever of some countries in Europe, and prevails in all parts of the United States particularly in cities, and all thickly settled places; it occurs much less frequently in miasmatic regions, though these are not entirely exempt, for in all probability, it is found more or less in every inhabited district. Though for a length of time realized in its different forms and varieties, its identity was never known, until after the researches of Louis, Chomel, and other pathologists who gave us a complete and comprehensive description of the disease; a description so comprehensive, and at the same time original, that the labors

of observers that succeeded, have scarcely added anything of importance, in an appreciable degree.

Symptoms.— There is a great difference, in different cases of typhoid fever, as to its mode of accession. The invasion is sometimes sudden, and distinctly marked, occurring unexpectedly in the midst of health, beginning abruptly by a chill, followed by the usual symptoms of fever; but more frequently, the attack is so gradual, and comes on so insidiously, that it is sometimes impossible to ~~fix~~ the precise point of accession. The patient complains of great lassitude, and an uneasiness which perhaps he cannot express, and often of headache, though sometimes only a sense of heaviness and vertigo. The tongue, when examined, is found to be coated with

a whitish or yellowish fur, or, when the disease is mild, is oftentimes almost natural in its appearance, and the appetite, though not entirely gone, is in the most of cases very much impaired; and these symptoms continue, until the patient feels it absolutely necessary for him to confine himself to bed. Frequently slight chills alternate with febrile movements, and when the disease is fully formed, all chilliness, cases and a continued fever sets in. For several days preceding the fever, there is not unfrequently a tendency to, and sometimes quite a troublesome, diarrhoea, or when this is not the case, there is an unusual susceptibility to the action of cathartic medicine. A characteristic symptom is, in many instances, the occurrence of epistaxis. The ordinary phenomena of fever, such as thirst, an-

oresia, frequency of pulse, dryness and heat of skin, pains in the head and limbs, and general debility, are now exhibited, the disease being fully formed. Sometimes the fever has a tendency to remission; though this is much less frequent, and the remissions are less distinct in this disease, than in ordinary remittent fever. Headache is a frequent symptom, and in some cases forms the chief subject of Complaint; and sometimes the headache is accompanied by pain in the back and limbs, and restlessness and want of sleep are not unusual - particularly at night. The pulse, though sometimes but little more frequent than a natural one, of a degree of fullness and strength, is in the majority of Cases, very frequent, small, compressible, and not unfrequently undulating or dicrotic, and sometimes also

irregularities and intermissions occur. The symptoms thus continue gradually increasing, until about the second week, when in general they are much more distinctly developed. The pulse becomes much more frequent, feeble, and compressible. Sordes collect on the teeth and lips, and the tongue becomes more dry, and brown, or coats itself with a thicker fur, showing a tendency to dryness, and often appears red at the edges. The diarrhoea perhaps is more abundant, the stomach is irritable, and the patient is troubled with pains in the abdomen, increased by pressure. Tympanites is made evident by percussion, and when pressure is made upon the right iliac region, a little gurgling sound is often discovered. The urine, which in the commencement was of a natural quantity, and but little changed in its appearance, becomes now more scan-

ty and highly Coloured. The disease is in the majority of cases attended by cough, with expectoration, which however is often so slight as to escape notice; upon the application of the stethescope, the sounds peculiar to bronchitis (the dry sonorous or sibilant rales) may be detected. Ringing, or buzzing sounds in the ears, are frequent, and dullness of hearing, sometimes amounting almost to deafness, is not unusual: the functions of the eyes are sometimes affected, so that the sensibility to light is much increased: imperfect vision is rare, though sometimes in the course of the disease, muscae volitantes appear, and the eye is dull, and corresponds with the heavy and stupid expression of the Countenance. While these symptoms continue, or change in a measure, others of a more decided character are superadded. If the surface be examined, the rose-Coloured

eruption may be seen, usually upon the abdomen, though sometimes extending to the chest, rarely however to the face and limbs; and this eruption is so common, and so rarely seen in any other disease, that it may be said to be a characteristic of typhoid fever; at the same time, upon a careful inspection, sudamina will often be detected, their most common seat being the neck and chest, though they are sometimes scattered extensively over the surface. Low delirium or stupor is present at this time, and often takes the place of the headache. Involuntary faecal evacuations, epistaxis, hemorrhage from the bowels, and retention of urine, are occasional symptoms. Debility is such, that the patient unable to turn upon his side, lies on his back, and slips involuntarily towards the foot of the bed. The tongue is observed to tremble

in the attempt to protrude it, which is done with great difficulty. Owing to the feeble vitality of the skin, a tendency exists in protracted cases to ulceration, which is shown by the formation of ulcers upon parts exposed to continued pressure. Finally, the pulse becomes exceedingly frequent, and scarcely perceptible, and twitching of the muscles of the face, and subsultus tendinum, make their appearance. The countenance assumes the Hippocratic aspect, the surface is bathed in perspiration, the extremities become cold, and death soon follows. But when the case is about to terminate in recovery, there is an abatement of the symptoms. The delirium subsides, the air of stupor clears away, the pulse is diminished in frequency, the skin recovers its temperature becoming more natural, and the tongue becomes moist,

either cleaning itself gradually from the edges, or throws off its fur in flakes, generally from the centre, leaving the surface smooth and red; and if the tongue cleans in the latter mode, the patient is not yet out of danger, as all the symptoms may become again aggravated; and it should also be observed, that in these cases, convalescence is almost always very tedious, and even months may elapse before the entire recovery of the patient. The duration of this disease is very uncertain, as may be said of almost all diseases, but it is especially true of typhoid fever, as its accession is generally insidious, and convalescence often so very tedious. The time of death, and that of convalescence, are equally variable. Convalescence generally begins in the third week, though sometimes much earlier, and frequently does not take place until the sixth

or seventh week; the disease cannot therefore be said to have any fixed limit. Death generally occurs in the course of the second or third week; but it occasionally takes place as early as the seventh, or eighth day, and sometimes as late as the sixth, or seventh week, or even later. The disease is sometimes very much prolonged, but the average duration is probably from three to four weeks. Of forty-six fatal cases observed by Louis, ten terminated between the eighth and fifteenth days, seven between the sixteenth and twentieth, twenty between the twentieth and thirtieth, and nine after this period. Relapse sometimes occurs after convalescence, though it is not frequent.

There are a few symptoms (which have already been spoken of) that seem to be

so important, as to require to be noticed distinctly. Tympanites is one of these, and is so usual, that it may be said to be, in a great measure, a characteristic symptom. It generally occurs later than most of the other abdominal symptoms, and is apt to persist till the termination of the disease. Together with the tympanites, pains are often felt in the abdomen increased by pressure, especially in the right iliac region, and at the same time a little gurgling sound will often be perceived. Diarrhoea is very frequent, though it is often wanting, and is generally among the first symptoms, preceding the fever, though occasionally postponed to a later period. The number of stools varies from one or two daily, to twenty or even more, and are generally of a yellowish appearance, sometimes dark, and bloody, and occasionally

a true hemorrhage occurs; the discharges are sometimes involuntary, without the notice of the patient, particularly at a late period of the disease. The pulse is generally frequent, small, and compressible, often undulating, or dichrotic, and irregularities and intermissions may also occur; its frequency varies from 70 to 120 or 130 in the minute, and is sometimes very much increased, even to 150 or 160. The eruption which has been called rose-coloured, seems to be one of the most important symptoms of the disease. It consists of small, roundish spots, of a rose colour, slightly elevated, and always disappearing under pressure with the finger, but returning immediately upon its removal, and this is so frequent, and so rarely seen in any other disease, that it can be said perhaps to be a characteristic. It is occasionally seen upon the

extremities, but usually upon the abdomen and chest, and generally occurs in the second week of the disease. Headache though sometimes absent, is very frequent, and among the most important symptoms. It is among the earliest symptoms, and does not usually continue longer than the seventh or eighth day, when it frequently gives way to stupor or delirium. The delirium is usually preceded by stupor or more or less drowsiness, which is amongst the earliest symptoms, and shows itself in the heavy and stupid expression of the countenance. Instead however of this somnolence, there is sometimes morbid vigilance, often associated with restlessness or delirium. The delirium of enteric fever is peculiar, and has been called low or muttering. Though sometimes attended with such mild and violent

agitation, that force is required to keep the patient in bed, it is usually mild, attended with drowsiness or stupor, so that he lies muttering, with his eyes half-closed, and pays no attention whatever to things that pass around him. Dullness of hearing, sometimes accompanied with tinnitus aurium, is a symptom that is often observed in typhoid fever, which varies very much in degree, being sometimes so slight as to escape notice, and sometimes so great as to amount almost to deafness, and generally occurs after the first stage of the disease.

Although the description given may be generally applicable to typhoid fever, it is seen in different forms, and is sometimes complicated with other diseases. Sometimes, nearly all the grave symptoms being absent, the disease

is very mild, and under such circumstances, there is nothing more than a moderate fever, with perhaps a slight diarrhoea, the nervous system is but little deranged, and the eruption peculiar to the disease may be entirely wanting. The tongue remains moist, and perhaps almost clean throughout, and recovery takes place in two or three weeks from the commencement of the disease. In other cases which may be mistaken for remittent fever, gastric and hepatic derangements are predominant, evinced by the tenderness of the epigastrium, nausea, and vomiting of bilious matter, and yellowness of the conjunctiva and skin. Sometimes the typhoid symptoms predominate, as shown by the dark evacuations from the bowels, sordes upon the teeth, a dry and brown or black tongue, low delirium, a feeble and frequent pulse, and a deficiency of muscular strength.

There is also another class of cases which Louis calls latent, in which there are no prominent symptoms of derangement of the nervous system, and in fact, all the symptoms peculiar to the disease may be wanting, the patient being often able to go about: and it may be observed here, that perforation of the intestine, followed by peritonitis, which sometimes happens in the course of the disease, generally occurs in these cases.

The most frequent complications of enteric fever, are probably meningitis and pneumonia. Erysipelas also sometimes occurs. Peritonitis is very important, which, as before observed, occasionally occurs in the course of the disease, and is caused by perforation of the intestine, and the consequent escape of its contents into the cavity of the peritoneum.

Anatomical Characters. — There are

certain organic changes, that occur invariably in typhoid fever: But there are a great many others (the most of which are unimportant) which are not constant, and may be said to be accidental. The most frequent of these alterations are those of the Spleen, which is almost always more or less changed, being generally very much enlarged - in some instances three or four times its usual size. It is also usually diminished in consistence, and the softening and enlargement may exist together: it is also often changed in colour, being darker than natural, and sometimes almost black. The liver is also often changed in structure, the most common alteration being diminution of consistence. The heart and aorta may be changed in colour, but the most common alteration in the heart is softening.

Blood drawn during life rarely exhibits the buffy coat, and is often apparently unaltered: the most frequent change is a diminution of the proportion of its fibrine. The brain is very frequently free from lesion, but its membranes not unfrequently exhibit signs of inflammation, and effusion of serum is sometimes observed; but both the brain and membranes are often quite healthy in appearance. The epiglottis, larynx, and trachea, are occasionally ulcerated, the bronchial mucous membrane is frequently of a more or less red colour, and the lungs sometimes exhibit signs of inflammation. The pharynx and oesophagus are occasionally ulcerated, and the mucous membrane of the stomach is sometimes ulcerated, softened, reddened, and mammellonated. The large intestine is generally distended with air, and is often the seat

of ulceration. Besides the lesions above mentioned, and those characteristic of the disease, others perhaps can be found in some instances, which however, as they are not frequent, and may be often seen in other diseases besides the one under consideration, (as may be said of some of those already observed) may be left entirely without notice. The lesions already mentioned are inconstant, and some of them are rare; but there are certain other anatomical changes that invariably occur, and may be said to be characteristic of the disease. The lesion referred to, is that of the elliptical plates, or glands of Peyer. These bodies have been examined at all stages of the disease after the sixth day, and their condition for the most part depends upon the stage of the disease, and their distance from the

ileo-caecal valve, changes occurring first in those near the valve, and afterwards in those higher up. At first the patches become enlarged, their surface is elevated, and they are more perceptible. Then, as the disease advances, they become reddish perhaps, and ulcerate. There are two varieties of them observed by Louis, the hard, and the soft. The soft ulcerate, and the hard either ulcerate, or undergo resolution. The ulcerations vary in depth, sometimes reaching only as far as the muscular coat, sometimes extending to the peritoneal coat, and occasionally the peritoneal covering itself gives way, and the contents of the intestine are discharged into the cavity of the peritoneum and peritonitis follows. The isolated mucous follicles of the ileum are generally affected in the same manner as

the glands of Peyer, undergoing the same alterations, and like them are most changed in proportion to their proximity to the valve. The mesenteric glands are always diseased more or less, being mostly reddened, enlarged, and diminished in consistence.

Causes.— In regard to the cause of typhoid fever there is but little known. The disease occurs both epidemically, and in single isolated cases. It may prevail at any time, but is probably most frequent in the autumn and winter. Age seems to have a very great influence, as it rarely attacks persons after the fiftieth year, and is not often seen after the age of forty, but generally occurs between the fifteenth, and thirty-fifth years. It is not very frequent prior to puberty, and seldom occurs in very early life. The disease has been ascribed in some in-

stances to unwholesome food, and poorly ventilated places, with a vitiated air; but it occurs as often perhaps under other circumstances. The new residents are more liable to be attacked than the old residents of cities, where the disease appears to be generally more prevalent, than in country places. Again it is presumed, that a predisposition exists, which may be brought into action by various exciting causes, as fatigue, excesses, and exposure to the vicissitudes of weather. It need hardly be said, that the cause of typhoid fever has been thought by many to be contagion. Exemption from second attacks in a great measure has been observed, and this has been addduced as evidence in favour of the opinion of its contagious nature.

Theory. — The real nature of typhoid

fever is unknown. The disease has by some, been referred to enteritis, or gastro-enteritis. Again it is presumed by others, to consist essentially in the peculiar condition of the glands of Peyer. There is another opinion, which considers the disease, as consisting in an alteration in the blood; and another theory still has been adopted, that the nervous system is acted upon primarily, after which, changes take place in the organs and the fluids.

Diagnosis. — Though it is sometimes impossible for the first few days of typhoid fever, to determine with any degree of certainty upon its character, there is frequently no possibility of confounding it with any other disease. If in the first stages of the disease, there be nothing more than headache, with giddiness, a slight diarrhoea, and a moderate fever, the diagnosis is very uncertain; but if to these symptoms

there be added great muscular debility, dullness of the intellect, commencing stupor, epistaxis, and ringing or buzzing sounds in the ears, and if in the second week, there be delirium, a dry, brown or blackish tongue, sordes upon the teeth, gurgling upon pressure upon the right iliac region, and twitching of the tendons, meteorism, and the rose-colored eruption make their appearance, all doubt and obscurity will be removed; and when the disease is fatal, the diagnosis will be confirmed by a post-mortem examination. Typhoid fever is not unfrequently confounded with meningitis; but by close attention to the symptoms that have been enumerated, the former may generally be distinguished. Meningitis is frequently attended in the early stage by delirium, with violent agitation, while in typhoid fever, the delirium does not often make its appearance

until the end of the first, or beginning of the second week, or later, and is generally attended with drowsiness or stupor. In meningitis, the headache is generally much more severe, and there is a great difference in the state of the bowels in the two diseases, there being diarrhoea in one, and constipation in the other. Typhoid fever may sometimes be mistaken for enteritis; but enteritis, though attended with some of the symptoms that are found in typhoid fever, as diarrhoea, and tenderness upon pressure upon the abdomen, may be distinguished by the absence of, gurgling on pressure over the right iliac region, the rose-colored eruption, and various symptoms that have been mentioned indicative of the typhoid state. As there is frequently a tendency in the disease to remission, it may be confounded with remittent fever; but typhoid

fever may generally be distinguished by some of the symptoms peculiar to it, that have been already noticed, and the absence of yellowness of skin and vomiting of bilious matter; the remissions also are usually much less distinct than in remittent fever. The disease with which it is perhaps most frequently confounded, is typhus fever. The circumstances under which the disease occurs, may often be of assistance in the diagnosis. Typhus fever is a contagious disease, is not continually prevalent, is often epidemic, and is apt to occur amidst filth, with a vitiated air, in confined places. Typhoid fever, on the contrary, is an endemic disease, occurs in isolated cases, and perhaps as often amidst purity as filth. Typhoid fever rarely occurs after the age of fifty, but typhus fever is frequent after this age. There are also important points of differ-

ence in the symptoms of the two diseases. Epistaxis is less frequent in typhus than in typhoid fever, and hemorrhage from the bowels which is frequent in typhoid fever, rarely occurs in typhus. In typhus fever, the discharges from the bowels are usually dark, the bowels are generally constipated, and no stools are procured without medicine; in typhoid fever on the contrary, the discharges are mostly yellowish, and there is either diarrhoea, or an unusual susceptibility to the action of cathartic medicine. In typhoid fever, meteorism is almost invariable, the abdomen being obviously distended, which is rare in typhus. The eruption of typhus differs from that of typhoid fever. It is usually of a darker hue, is not elevated, or scarcely elevated above the surface, does not readily disappear under pressure, and

in the advanced stages is often unaffected by it. It generally commences earlier than the eruption of typhoid fever, and is not confined principally to the abdomen and chest, but is found equally upon the extremities, and sometimes covers almost the whole body.

Prognosis. — In regard to the rate of mortality of the disease, it is very difficult to arrive at the average result; it depending very much upon the character of the disease in any particular place, some epidemics being very fatal, while others are comparatively mild: age also has some influence, the disease being usually more fatal in middle-aged, than in young persons. As to the termination however, of any particular case, though in many instances the favorable and unfavorable symptoms are so confounded, as to make it extremely

uncertain, we may often come to a correct conclusion. If in the course of the disease, the pulse becomes exceedingly frequent, more than 120 or 130 in the minute, if there is much stupor or delirium, if the patient is disposed to think himself free from danger, if there are, urgent diarrhoea, and involuntary discharges, or hemorrhage from the bowels occurs, and twitching of the muscles of the face and subsultus tendinum make their appearance, a fatal termination may be anticipated. Occasionally peritonitis occurs in the progress of the disease, which is caused by perforation of the intestine, and the consequent discharge of its contents into the cavity of the peritoneum. The patient is seized with severe pain in the abdomen, which is exceedingly tender

upon pressure, the knees are drawn up, the patient lying upon his back, sometimes rigors occur, and there are constant thirst, obstinate vomiting, and constipation, the pulse is quick and contracted, and the countenance is changed. When this accident occurs, death may be considered as almost inevitable. On the other hand, when the disease is about to terminate favourably, the symptoms are mitigated. The delirium subsides, diarrhoea if present is less abundant, the tongue cleans and becomes moist, the skin relaxes, and the pulse is diminished in frequency.

Treatment. — Many different methods of treating the disease have been adopted, but it seems to be generally admitted that an exclusive system should not be followed. As the disease varies very

much in its character, a plan of treatment which might be applicable to one case, could not be indiscriminately used in another.

In the commencement of the disease although there is diarrhoea, some mild laxative, such as castor oil, should be given for the purpose of clearing out the faecal accumulations, that might give rise to irritation of the intestinal canal; and if the discharges should be scanty, laxatives may be given throughout the disease. Castor oil, magnesia, or Seidlitz powders, will answer the purpose. On the other hand, if the diarrhoea is such as to exhaust the patient, it should be checked by small doses of opium, with acetate of lead, kino, or tannic acid. The febrile symptoms generally require some attention. Although general bleeding would in many cases be positively injurious,

yet frequently in the first stage of the disease, in case of sanguineous determination to the brain or other vital organ, it may be useful by preventing local inflammation. When this indication is not presented, or the pulse is not full and strong, it is best to omit the remedy, though local bleeding when called for, may generally be used with advantage, at almost any stage of the disease. Refrigerant diaphoretics, such as solution of acetate of ammonia, and citrate of potassa, will often be found beneficial: the antimonials have been recommended, but as they have a tendency to irritate the bowels, the citrate of potassa in the form of neutral mixture or effervescing draught is preferable, which may be given as long as the skin is hot and dry, and the pulse not very feeble, and if

it should produce any uneasiness of the stomach or bowels, may be combined with some preparation of opium. As the patient is often restless at night, a dose of Dover's powder, or some other preparation of opium, may be given at bedtime. Cold drinks should be given to the patient, and if it be desired, a little ice may also be allowed; and if the skin is hot and dry, sponging the surface with cold water will be found useful; at the same time a cool room and cool air are desirable. Headache, when severe, may be treated by leeches, and applications of cold water or ice. Should much tenderness be found in the epigastrium, or right iliac region, or in any other part of the abdomen, a small quantity of blood may be taken by leeches or cups; mush poultices kept

for some time upon the abdomen are useful, and blisters are sometimes employed. If there is much pain, with tympanites, local bleeding, emollient cataplasms, or warm fomentations, and rubefacients, may be used. Irritability of stomach may be relieved by soda and morphia, or the application of a mustard cataplasm or fomentations to the epigastrium. In the second week of the disease, the condition of the patient seems to be quite different from what it was before, and something more is now required. Mercury has been highly recommended by some, while others think it of no avail. Oil of turpentine is also recommended. It is useful probably by acting as a stimulant and diuretic. Prof Wood thinks that it acts chiefly as an alterative to

the ulcerated surfaces in the intes-
tinal mucous membrane, and says
that there is a peculiar condition in
which he has found it especially
beneficial; and that is, when the
tongue becomes dry after parting
with its fur in large flakes, generally
first from the middle or back part
of the surface, which is left smooth
and glossy. Diuretics will frequently
be found beneficial in this stage of the
disease. The common effervescing mix-
ture, or the acetate of potassa, and
the oil of turpentine are the most
useful. It is in this stage of the
disease, (the second week) or in the third
week, that the use of tonics and stim-
ulants becomes necessary. The period
however varies very much in different
cases. The practitioner must be guided
by the condition of the patient. When

the tongue and teeth are incrusted with dark sordes, and the pulse is rather slow, and feeble, and the skin cool, tonics or stimulants will be beneficial; and they may also often be given with advantage when the skin is rather hot, and the pulse very frequent and feeble. If, when given, they diminish the frequency of the pulse, relax the skin, and moderate delirium, they may be continued: if on the other hand, by their use, the frequency of pulse, heat of skin, and nervous disorder, instead of being diminished, are increased, they should be omitted. Small quantities of the mildest should be administered first. Serpentaria has been much employed, to which may be added sweet spirit of nitre. The preparations of bark are also often

useful: Sulphate of quinine is the best. Oil of turpentine, wine-whey, and carbonate of ammonia are useful as stimulants, and brandy, if necessary, may be employed. Opium when indicated as a stimulant, may be employed, and it is also useful in all stages of the disease, by checking diarrhoea, producing perspiration, and relieving nervous disorder. But if it increase stupor or delirium, it should be omitted. In the last stages of the disease, it sometimes becomes necessary to make use of stimulants externally. Solution of ammonia, oil of turpentine, or capsicum heated in brandy, may be rubbed upon the extremities: Sinapisms may be applied to the arms and legs. Blisters are sometimes employed, which should be kept on no longer than is necessary to pro-

duce a rubefacient effect; when this effect is produced, the part may be dressed with an emollient poultice. It is highly important to attend to the various complications, that may arise in the course of the disease. Hemorrhage from the bowels may be treated with opium, combined with acetate of lead, or kino: oil of turpentine is also a useful remedy. If there should be copious epistaxis, the application of cold and the ordinary astringents may be tried, and if these should fail, recourse should be had to plugging the nostrils. Erysipelas may be treated by the local use of tincture of iodine, and nitrate of silver, and mucilaginous applications. In case of delirium, cold water or ice may be applied to the

head, and if the patient can bear it, blood should be taken by means of leeches or cups. In case of obstinate delirium, or coma, advantage may frequently be derived from shaving the head, and applying a blister to the scalp. In cases of subsultus tendinum, and great restlessness, assafoetida or camphor, and Hoffmann's anodyne may be useful. In case of peritonitis from intestinal perforation, the only remedy to be relied upon is opium, which should be given in large doses. At the same time, perfect rest should be enjoined, and no food, either solid or liquid should be allowed. In cases complicated with pneumonia, the only object generally, is to support the system, as the patient cannot often bear the abstraction of blood. Carbonate

of ammonia and senega may be administered. If it can be done, however a small quantity of blood may be taken by the application of leeches to the chest, or by cups. It is important to attend to the state of the bladder in this disease, as retention of urine may occur, which requires the introduction of the catheter. To prevent sloughs from continued pressure, the parts should be bathed occasionally with spirit, and the position of the patient should be frequently changed, or pillows may be adjusted, so as to avoid pressure on points, that are prominent. The diet of a patient labouring under typhoid fever should be very light, consisting principally, in the early stages, of liquid substances. Weak solutions of tapioca, toast and water, barley-water, rice-water, and other

similar preparations may be used. A little iced-water, carbonic acid-water, and lemonade may be allowed as drinks. In the second week of the disease, the diet should be more nutritious; preparations of tapioca, and thick gruels, may be given, which, if debility be great, may be flavoured with wine; and in the last stages, it will be necessary to resort ~~to something more stimulant~~, as milk punch, or egg beat up with wine. The management of the patient during convalescence, is of importance. The object is, to prevent a relapse. The patient should avoid premature exertion, and his appetite should not be too soon indulged: the diet should be nutritive, and easily digestible, and, if necessary, the bowels should be kept open by mild cathartics, or enemata. If the patient is affected with night

sweats, sulphate of quinia, and the
mineral acids will be found useful.

An

Inaugeral Dissertation

on

Malaria

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of the Provost Regents and Faculty
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Of the University of Maryland

For the degree of

Doctor of Medicine

By

Curtis J. Trenchard

of

Kent County Maryland

1830

Noxio Miasmata, Miasm, or Malaria,
which is the mos common name, (and
the one I shall use), for that subtle
gas or air, evolved from marshy dis-
tricts of country, and giving rise to
intemittent, and remittent fevers.
Of effluvia, exhaled from decaying
matter there are two Kinds.
Noxio Miasmata which is the subject
of this thesis and, Idio Miasmata.
Of the latter, I have but little to say.
It is produced by the decay, and putrefac-
tion, of animal matter, and the exha-
lations from sick persons. Its habitats
are principally, in crowded parts of
cities, hospitals, and badly ventilated
appartments of the sick.
Noxio Miasmata arising from vegetable
matter in decay, requires for its produc-
tion, development, and dissemination

earth, air, heat, and moisture.
There are many theories, respecting its origin. Some assert that it is produced from certain soils, without the aid of decomposed vegetation, and there are many instances, cited to prove this. In Dr Watson's Practice there is taken from a paper published by D Ferguson accounts of armies suffering severely when encamped in ravines, which are at certain seasons of the year water courses, and the beds of these ravines so covered with rocks, and stones, as to make the growth of vegetation impossible. He says, that, in the most unhealthy parts of of Spain, we may in vain look for lakes, marshes, ditches, pools or even vegetation. Spain generally speaking is then, though as prolific of endemic fever as Walcheren, is beyond all doubt one of the dryest countries of

Europe. And it is not till it has again, been made one of the wettest, by the periodical rains, with its vegetation, and aquatic weeds, restored, that it can be called healthy, or even habitable, with any degree of safety. From these and other facts he not only believes vegetation but moisture to be unnecessary to its production.

Dr Eberly says in answer to, Dr Ferguson that the soil from which the malaria was emitted, had been previously saturated with water during the rainy season, and therefor moisture must have existed in abundance a short distance under the surface of the soil. And that under such circumstances, miasmata might be abundantly sent forth without any obvious humidity, and vegetable decomposition on the surface: and the vegetable remains

collected in the rainy season were decomposed during the drying process and left mingled with the surface of the soil. Dr Wood says. Vegetable decomposition has been mentioned among the requisites. That it is so is infered from numerous circumstances, attendant upon the development of the morbific influence. In no situations is this so powerful as in the deltas and along the banks of large tropical streams, which in their period of flood bring down the washings of the soil, laden with vegetable remains, and upon subsiding leave them rotting in the hot sun. It is also peculiarly destructive, when grounds covered with a luxuriant vegetation, are overflowed so as to destroy the plants, and occasion their putrefaction.
Other writers deny the existence of it altogether. Among which is Dr Bell.

He attributes the diseases to which it gives rise to atmospheric changes removal from a dry to a wet situation. alternate extremes of heat and cold insufficient nourishment &c. From the study of these and other writings and from my own observation (and living in a district when its effects are every year more or less seen. I have had some opportunity of observing) I have deduced the following. That the prevalence of intermittents in those low damp countries which are annually covered with grass and reeds: and the almost entire exemption from them in higher lands would lead to the supposition that there was something peculiar to these grounds which gave rise to these febrific diseases. That these diseases are not brought on by exposure we might infer from the fact that at

certain seasons of the year persons are exposed to all weathers without any fear of such results. And that during the time when it is most prevalent; those who are in no way exposed sometimes suffer as severely as the rest.

That decomposed vegetation is essential to the production of Malaria would present itself to the mind of almost every observer of its habitats. The known virulence of its effects along the margins of ponds and streams during the decay of the product of the soil.

That malaria is sometimes exhaled from sandy barren soils entirely destitute of vegetation does not preclude the possibility of its being there in a state of decomposition. I have seen in the Southern parts of New Jersey whole trees dug from their beds a few feet below the soil.

And who has not at some time seen vegetable deposits deep enough below the ground to raise almost as many speculations how they arrived then as there is relative to the origin of Malaria.
In other places of the same state where except pines little or nothing else grew; at various depths has been found and quite extensively used for the improvement of the land beds of decayed vegetable and animal matter. They are generally to deep to be acted upon by heat for the evolvement of malaria. May not the same thing occur in those places mentioned by Dr. Ferguson. We will scarcely find a spot of this earths surface that is not covered or imbued with both vegetable and animal remains in a state of decomposition and ready to afford pabulum for the sun's

rays with or without humidity to
effect the injurious principle
in question (Dr. Johnson). Heat and
moisture are indespensable to its elim-
ination. In latitudes where the tem-
perature of the atmosphere does not
exceed 70 Fahrenheit, intermittents sel-
dom or never occur in an epidemic
manner. The more powerful the
heat the more abundantly is it
evolved. The hottest seasons are the
most unhealthy. It would seem
that although heat contributes so
powerfully to its bringing forth if
it be itself very great prevents its
action upon the human system
until condensed and precipitated
by the cool evenings. Moisture also
if it be in excess prevents its action
probably by holding it in solution
and so withholding its exhalation

In very dry seasons situations apart from low grounds and pools of water are healthy while those near ponds and streams are almost certain to suffer. And the reverse. When the meadows and low grounds are submerged the ponds full and the banks of streams are extended beyond their usual limits then the more elevated portions of country are affected. This is observed by the people of malarious districts generally. It is said that a mixture of salt and fresh water is productive of a much larger quantity of this pestilential effluvium than the are in a single or uncombined state. There is in the southern part of France a large saline pond. At a short distance from it another containing fresh water

When these ponds are overflowed the salt and fresh waters become mingled it is most generally accompanied with an increase of sickness in the country round about. But this does not always seem to hold good. Along the shores of Delaware bay are extensive salt marshes often flooded by the tide from the bay and when retreating leave large ponds through and on the borders of the marshes adjoining the main land. Those situated at the junction of the mash with the sound land; during heavy rains receive large quantities of fresh water and no injurious effects result from the union. Another feature of these marshes is that these ponds which are abundant throughout their whole extent are in some seasons of little rain and low tides

left with their surfaces perfectly dry and no want of vegetable or animal putrefaction; yet the surrounding country is perfectly healthy. This is I beleive ascribed to their extreme saltness which is proverbial and they are called salt ponds. Intermittents seldom prevail extensively along salt marshes.

When ponds or ditches of fresh water are left dry with a hot sun miasmatic diseases are prevalent.

On the Eastern Shore of this state is situated a village a short distance from a mill pond. In 1840 the dam of this pond was broken in the spring by very heavy freshets and the bottom exposed during the summer to the rays of the sun. The inhabitants of the village were with hardly an exception taken

sick and the mortality very large nearly one fourth of the whole population perished. Miasmata after its production and disengagement is disseminated through the medium of the air. Hanging in the air it is of course moved in its currents and by their changes in different directions. There is much difference of opinion in regard to the distance to which it can be moved by winds and produce its pernicious effects. It is thought by some that half a mile is as far as it can be carried. Others say one two three and some four or five miles. I know of no way of determining the fact. Long continued winds blowing across marshy distnicts carrying with them this deleterious agent occasion sickness in situations

which from their height an distance from its usual haunts are commonly healthy. And in this manner places usually affected are for the time free. Lancisi the first writer of note on miasmata relates an anecdote of thirty ladies and gentlemen on a sailing excursion to the mouth of the Tiber. Upon the shifting of the wind and blowing across a marshy tract twenty nine of the thirty were immediately taken with ague. Malaria is thus sometimes carried up the sides of very high hills and even blown over and deposited on the other side. When blown over water of much extent it is said to be dissolved and retained in a state of solution. Sailors sleep in the open air with perfect safety when anchored some distance from the shore.

The fogs and mists arising from the fall of water over rocks are often loaded with malaria and exercise their usual effect on persons inhaling them. Malaria while it contributes so largely to the destruction of health is said to add to the growth of vegetables and this partly accounts for the non appearance of fevers in the spring and summer. The rapid and vigorous growth of vegetables in these season's consuming all organic decomposition which may be going on in the soil. Some plants are thought to possess this antimiasmatic property in a greater degree than others. Dr Cartwright of Natchez thinks the Jussiena grandiflora or floating plant has the power of absorbing the miasm as fast as produced. The plant derives none of its sustenance from

the soil but from the water in which it grows. The waters of the ponds and lakes it inhabits are said to be all the time fresh and sweet or pure. Malaria is also attracted by lofty umbrageous trees - and bodies of wood often serve to protect situations when they are interposed between them and places where it is generated. This is known very well to the inhabitants of Guiana who live fearlessly near the most destructive marshes under the protection of woods situated between. Lancisi it is said wrote a remonstrance to the Pope against felling some trees between the city and the pontine marshes. Dr Elderly relates the fact of a convent remarkable for its salubrity untile the trees by which it was surrounded - being! cut down changed

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and became very sickly. Night is the time when malaria is most abundant and most virulent in its effects. Persons in malarious district sleeping in the open air with their windows open are most certain to suffer. This is generally very well known to the people, who sleep with open apartments during the summer but are very careful to close them in the sickly season. The effluvia appears to rise by the heat of the sun and to be so dispersed as to become innocious: but to acquire a dangerous concentration by its union with the moisture which forms the morning and evening dews. Being precipetated with the dews it follows of course that it is most densly concentrated near the ground and this is verified by most obser-
vers.

Dr Ferguson says: the inhabitants of ground floors are uniformly affected in a greater proportion than those of the upper stories. This seems to be entirely unknown to the residents of the district I have seen. A great many of them have their beds on the first floor and generally prefer sleeping there. The production of malaria decreases with the improvement and cultivation of lands and with the increasing population. Thickly settled towns and cities are scarcely ever much annoyed with its effects. Dr Watson thinks the reason is the large number of fires burned in them. The Italians date its introduction into the Maremma from the great plague of the sixteenth century which so nearly depopulated it. Of the nature of malaria there has been a vast deal said and many ingenious theories

started but none that I know of ever yet established. And until chemical analysis shall have become more minute the tests finer there seems to be little hope of the discovery of its true nature. Some think the poisonous influence is attributed to minute animalcules which are generated by the putrefaction of vegetables. Carburetted hydrogen which is a well known product of marshes is thought by others to be the active agent but then it is not capable of producing the peculiar effects and in the mines where it is most abundant there is no appearance of intermittents or remittent fevers.

Prof. D. P. Gardner in an article on the active principle of Malaria published in Braithwaite Retrospect, attempts to prove that sulphuretted hydrogen is the active principle from experiments with silver in marshes by which he

detected it. Dr. Pritchet controverts his views and experiments by others and says: All the world knows that every chemical lecturer produces sulphuretted hydrogen gas in abundance in his lecture room and that its odour is sometimes disseminated for the edification of the audience but never with the effect of inducing african fever. He thinks that solar influence combined with electricity acting on the system in a hot and moist atmosphere is the chief cause of the disease. Dr McWilliams in the British and foreign Medical Review also disagrees with Dr Gardner and asserts that no such gas as sulphuretted hydrogen is found in the niger where the fever was so fatal. Sulphuretted hydrogen is certainly most abundantly generated in cities without any of the effects of marsh air

From Prof Julia of Lyons given by Dr Eberly the deleterious influence of malaria depends on particles of putrid animal and vegetable matter dissolved and suspended in aqueous vapour.
In Dr Wood's Practice we read that M. Boussingault detected organic matter in the air of marshes by the agency of sulphuric acid.
Among so many theories would take a much wiser man than myself to judge with correctness the best and there seem as yet little need of choosing any one. They all seem to be but unestablished hypothesis

A Thesis On inflammation
per A. S. Drummond –
Baltimore –
Feby. 1850 –

An inaugural Dissertation on Inflammation,
Submitted to the Examination of the Provost,
Regents, and Faculty of Physic of the Univ-
ersity of Maryland, for the degree of
Doctor of Medicine.

By Alex. Drummond —
of Petersburg Virginia —
1830

The fall of man from the favour of the godhead, is only commensurate with his suffering. The abduction of grace, induced the induction of sorrow, and death. His fall was the cause of the dissemination of the seeds of death in, and around him; it was the cause of the opening of Pandora's box, from whence the pestiferous vapours pregnant with disease, were spread over the length, and breadth of the world. From Man's disobedience sprang sorrow, disease, and death. Of all the diseases flesh is heir to, there is none more common than inflammation; it enters as a constituent into almost every malady, manifesting itself either at its commencement, or during some period of its progress; constituting at one time the original complaint itself, at another being but a mere complication. The diffusiveness of inflammation both as a primary, and secondary disease, renders it a very extensive container of human existence, and causes it to be greatly dreaded by both the sufferer, and attendant. Hence arises the necessity for the Physician to obtain a correct knowledge of its phenomena, causes, diagnosis, prognosis, results, and best mode of treatment.

The term inflammation is derived from the latin word inflammatio, which is a compound of in' within, and flamma 'flame'. It may be defined to be a perverted action of

the blood and blood vessels of a part interrupting its healthful function, and changing its normal structure; ordinarily attended with redness, heat, pain, and swelling; and inducing more or less disturbance of the general system. The absence of one or more of these symptoms of inflammation is not incompatible with the existence of pain, heat, and redness may be wholly wanting, and yet inflammation may exist.

Whenever a part is irritated — as the bite of a frog's foot — in any manner whatever, the capillaries of the part are invariably affected in their diameter. Wilson Philips, Hastings, and others, assert that they are at first diminished in size. Thompson says that they are immediately expanded. Gendrin would have them at first unaffected. Although pathologists differ as to their primary action when first irritated, they all admit as an undeniable fact, that they are ultimately enlarged or dilated. Inflammation begins simultaneously with the dilatation of the capillaries, and not before. As soon as dilatation has commenced the circulation in the affected vessels becomes slower, and seems to be uncertain as to its course. The globules of the blood appear to converge from all points towards the seat of the irritation. The

blood has at the same time undergone a change as to its normal proportion of colourless corpuscles; they are evidently increased in number, and evince an affectionate tendency for each other, and for the walls of the vessels, along which they slowly conduct their way, and to which many of them adhere. They sometimes accumulate in such large quantities to the walls of the vessels as to block them up, thereby preventing the passage of the red corpuscles, though the liquor sanguinis freely percolates through them. The accumulation may be so great as to cause complete stagnation in some of the vessels, while in others the circulation is but little affected, and in some of the larger it may be greater than in health. If the dilated vessels be again irritated they can seem to contract, but soon dilate again. The contraction produces paleness by emptying the vessels; but the dilatation causes them to be red, by admitting more blood than they contain in their normal condition. If the stagnation continues the blood becomes dark coloured, serum is exuded, and then the whole liquor sanguinis; the tissues become softened, and at length portions are detached, causing loss of substance. Subsequent changes take place in the exuded matter according as the inflammation terminates in resolution, adhesion, suppuration, gangrene, &c —

The theories of inflammation have been various. Boerhaave thought that it was produced by the entrance of red corpuscles into vessels too small to permit their passage through them; this he termed Error loci. Cullen advocated the doctrine of spasm in the extreme arteries. These old notions however, have been long ago exploded by the researches of pathologists, and have become as it were "the school-boy's tale, the wonder of an hour". Even at the present time pathologists are not agreed as to the action of the capillaries in inflammation; some contend that they are in a state of increased action; others that there is deficiency of action, or in other words debility. The first theory that of increased action has at present the sway. It has leagued with it the influence of many learned, and tallented men; thus for example, Van Helmont, Stahl, Haller, Cullen, Hunter, Bichat, Williams, Graves, &c are all advocates of this doctrine. The advocates of the above doctrine however, differ widely among themselves, as to the precise nature of the action. Men are generally thinking beings, and do not like to be doctrinated in inexplicables; they generally require to be convinced, before they can consent to believe. There are some men who notwithstanding the tallented array made by the advocates for increased action,

doubt the truth of their doctrine, and with great firmness contend for deficiency of action, or debility of the capillaries. For this latter doctrine we have Vacca at Florence, Allen of Edinburg, Wilson Philip, and some few other independent thinkers, who have refused to be cramped by the trammels of authority, and have hewn out for themselves cisterns that still hold water. I dislike as much as any one, to run against the buckler of admitted facts, for it is "hard to kick against the pricks", yet I would much rather submit to the injury occuring therefrom, rather than cry-out on every occasion

"Did Marcus say 'twas fact? then fact it is;
No proof so valid as a word of his".

This "Marcus dixit &c" does not belong to an inquiring mind. From the various arguments I have seen, both pro, and con, I am induced to believe with Vacca, that the capillaries are in a state of debility. It has been before stated that inflammation begins with the dilatation of the capillaries. Since this dilatation is the commencement of inflammation, it behoves us to investigate first of all, the cause of this phenomenon; whether it be increased, diminished, or any other action. That the theory of Boerhaave, error loci, cannot be the cause of

the dilatation, is palpable to every one. Dilatation is not the effect, but the cause of the retardation of the current of blood. If the dilatation be owing to the current of blood it should be effected gradually, but the contrary is the fact, for the dilatation generally take place in a moment of time, as proved by microscopic examinations. It would be superfluous to adduce facts to prove the admitted absurdity of Carlsons theory, so I will pass it by in silence — The nervous system as a whole, presides over the functional activity of all parts of the human Organism. Contractility, sensibility, Secretion, Nutrition, &c &c, are all of them dependent upon the nervous influence for their activity. If the nerves that supply the lower extremity, especialy the crural, be severed, the limb instantly becomes paralyzed; its sensation, nutrition, Calorification, circulation, and motive power, soon all been more or less destroyed, and the member begins to wither away, if these suppressed functions be not speedily restored. If the pneumogastric nerve be divided, all those parts supplied by it below the point at which it is divided, become deranged in the performance of their functions; this is especially the case with the stomach, which loses its power of digestibility,

owing to the suppression of the secretion of the gastric juice. Many other examples can be adduced to prove the influence of the nervous system, over the function of organs. The thought of food in producing a flow of saliva; the mental state which excites the abundant secretion of urine in hysteria, as well as the perspirations and occasional diarrhea which ensue under the influence of terror, the tears excited by sorrow or excess of joy, and the occasional alteration of the secretions through grief, or passion, all force us to admit the great power of the nervous system in both controling and altering the secretions. Since the nervous system influence secretion, nutrition, calorification, &c, which have their seat in close approximation to the capillaries, they must likewise influence the capillaries by whose agency the blood which furnishes these various formative materials is conveyed to the respective seats of these functions. The want of circulation, heat, motion, &c, resulting from severed nervous injuries, prove conclusively, that the nervous system greatly influences the vascular. That the capillaries possess contractility, is proved by microscopic examinations, and is admitted by Haller, Cullen, Hunter, Bichat, Allen, Wilson Philip, and many other pathologists. The action

tion of the capillary arteries is contraction; and this contractility is due to nervous influence. Blushing is perhaps, the most convenient example we have that the capillaries depend upon the nervous influence for their contractile action. The partial flush does not depend upon the action of the heart alone, for, first, the heart often acts stronger without causing blushing, and, next, the blush is partial, whereas when the redness depends upon the hearts action it is general, not partial. Blushing depends not upon increased action, but upon the derivation of nervous influence, which, being directed to, or expended in the brain more freely by mental emotion, robs, for the moment, the capillaries of the face of their energy. The blush of inflammation produced by electric sparks, first of all produces pain, thereby showing that its primary action is upon the nerves. The same observations apply to the blush produced by the heat from a fire. This can be proved by the common experiment of those who continued to hold the burned part to the fire, and removed it gradually, which will prevent blistering. When blistering take place the mischief is caused by the exhaustion of the nervous influence; the sudden removal of the excitant leaves the capillaries destitute, and they yield immediately to the ordinary injecting force; but if the

excitation be removed, by holding the part to the fire, nervous influence is supplied from the neighbouring parts to the capillaries, with pain certainly, but, by slowly removing from the heat, the nervous influence will be gradually supplied, till the excitant be reduced to the natural standard, relieving the pain and incipient inflammation. The contraction of the capillaries is constant, from a constant operation of their organic nerves. The heart is always acting against the arteries, and they both derive their power from the nerves. The propulsive power of the heart has a tendency to dilate, or distend the arteries, and it would certainly accomplish its object, did not the nervi-vasorum excite the middle coat of the arteries to contraction, thereby overcoming the force of the heart injections. If the above statements be admited to be true, it follows that whatever produces dilatation of the capillaries, does so by overcoming the power of the nervous system which presides over their normal action, inducing deficiency of action, or want of tone. If the normal action of the capillaries then, be, contraction - the truth of which there can be no possible doubt - then anything that produces dilatation, induces an abnormal action, want of tone, or deficiency of action. Inflammation commences with dilatation of the capillary arteries, hence

the arteries in inflamed parts are larger than before. less contracted, that is, acting less. The cause of the dilatation then is diminished tone of the capillary arteries, they being too weak to resist the injecting power of the heart. If the cause was increased action we should have contraction instead of dilatation, paleness instead of the accompanying redness. That it is not due to increased action, is proved by the fact, that if this action be increased by cold, astringents, &c, the inflammation is diminished. At the beginning of inflammation the heart does not act more strongly than common, not affecting the pulse; so that the capillary arteries evince debility, having given away when there was no more force than they bore before without dilation; from this they sometimes recover of themselves by gradually contracting, or if not, the simple application of cold, or an astringent lotion, makes them contract, and the redness disappears. The dilatation of the Capillaries is generally the result of previous irritation, but according to Wharton Jones it may sometimes be the direct result of "Nervous Antagonism". The dilatation produces retardation of the current, but does not account for the whole of this effect, the retardation Amounting often to complete Stagnation, being very much greater than would be produced by simple dilatation on physical principles. The effect of dilatation upon a current is

beautifully illustrated by nature. Thus the current of a wide river may be equal to one mile per hour, but if that stream be divided into six or seven different streamlets, the current in each of these streamlets will be greatly increased, being six or seven times faster than it is in the parent stream. Hence we have the practical truth, that the wider the stream the slower the current, and vice versa. But the retardation is also owing to the viscidity of the colourless globules; it is the agglutination of them to the sides of the vessels that produces the stagnation. In health there appears to be a repulsive force existing between their corpuscles, and the vascular wall, which is wholly removed when inflammation has commenced. This force is in all probability nervous, as is proved by this phenomenon always occuring in inflammation, where we have seen that the nervous energy was for some cause or other entirely withdrawn. The pressure which is indirectly produced by the stagnation, forces out serum, and plasma, constituting exudation. The softening produced in inflammation indicates lesion of nutrition. Thus have I endeavoured to explain all of the phenomena of inflammation, upon the principle of deficiency of action. If I have succeeded in my endeavour, I am sufficiently repaid for my trouble; if on the contrary I have failed, I

attribute the failure to my want of capacity, instead of to the abstruse-
ness of the design. Be the result as it may, I shall still continue
to believe in this theory, which appears to my mind to be by far the most
reputable of the two. Before I proceed to consider the theory of increased
action, I will endeavour to answer some of the objections of Dr Wood of
Philadelphia, to the theory of debility of the capillaries. In the last
edition of his practice, page 43 he says, that the theory of debility however ing-
enious, fails altogether to account for the retrogression of the blood. I sup-
pose he refers to the lymph corpuscles - which is observed, by the use of the
Microscope, in parts irritated and reddened. I hope that the fly's
presumption will not materially disturbe the tranquility of
the host; but I am forced to dissent with the Dr on this point;
"the truth must out", there is no concealing it. It has
been before mentioned that when dilatation has been produced
, the lymph corpuscles are observed to change their course, and
retrograde towards the point of irritation. We are required to give
a reason for this deviation, which I will now endeavour to do.
During health there exists a force of repulsion between the lymph
corpuscles, and the vascular walls, which is wholly wanting in inf-
lammation, leaving them with a tendency to adhere both to the in-
-ner surface of the vessels, and to each other. The simple

act of them adhering to the vascular walls, demonstrates that they have a greater affinity for them, than for the centre of the circulation. Hence when the nerves influenced which go-verns both the contractility of the capillaries, and the force of repulsion, is removed, the corpuscles from all quarters are dra-wn as it were, by a force of greater attraction, to the point of irritation — Again says the Dr, if dilatation be the result of debility, then the greater the debility the greater should be the dilatation; the reverse is the fact — For example Contemne he, a violent blow paralyzing for the moment the vessels of a part produces paleness, instead of redness, which does not take place for some time afterwards. This long been can be readily explained upon the principle of irritation — Thus for example when an irritant as spirits, or oil of turpentine, or squills, or a solution of cantharides, or cold, or a violent blow, &c, be applied to the capillary vessels of a part, it will cause them to contract, in reality, stimulate them to action — Contraction — producing paleness — But the same agents, applied too strong, or for too long a time, exhaust the nerves influenced, and relaxation accompanied with redness — which has been erro-neously called arterial action — takes place —

The same Author says that he cannot see why the application of salt should produce direct dilatation, when the prick of a needle produces first contraction, and then dilatation as its consequence. This may be explained by the difference in strength of the two irritants - thus the salt may overcome at once the nervous influence by destroying it outright, while the prick of the needle being feebler, first stimulates to contraction, the dilatation occurring secondarily. We see this illustrated in the difference of action between the actual, and potential cauterants; the first destroys the vitality of the part to which it is applied directly, the second does so indirectly by the agency of the inflammation which it excites. They both accomplish the same result, but accomplish it at different times, and upon different principles. Thus much for Dr. Wood's objections to the theory of debility. I shall now proceed to consider the advanced theory, of increased action. The advocates for this theory say that because the artery supplying the inflamed part beats with greater force, and when divided, sends out the blood to a greater distance than in health, we should deem it conclusive evidence that there is increased action of the vessels. This inference from one of their best arguments, is certainly

incorrect. In Anemia, And every disease accompanied with much debility, we see the Carotids throbbing violently; thus was the case with the little boy we saw at the Infirmary some time since, who was to cates for intermittent fever, with accompaning dropsy. The throbbing in these Cases surely cannot be owing to increased action; nor it indicates plainly a different action; the more they throb, it shews that they the more yield to the injecting force of the heart. As to the Argument that the inflamed part will bleed more freely than the corresponding sound part, it is Answered by Dr Billing in this manner; that it simply demonstrates that the Arteries Contain more blood, in Consequence of their having become enlarged from diminished action. As to the Argument deduced from the influence of topical remedies of a sedative kind in relieving inflammation, it is worthless, and goes clearly to prove the reverse. Thus cold, and the preparations of lead act only by increasing the Contraction of the Arteries, thereby emptying them of the red blood they Contain, and thus produce paleness, and give relief. Dr Wood at page 44 in order to overcome the strong Argument against him, And his fellow advocates for increased action, namely, the sudden expansion of the Capiellary Arteries in inflammation, goes to work with the aid of Doctor

H. L. Hodge to invent a theory as old as Jno: Hunter, and Kaltenbrunner, namely - that of active dilatation. As it would be but a vain repetition, and waste of time, to enter into any argument to prove the absurdity of such a vain, and untenable theory, I will pass it by unnoticed.

mptoms The symptoms of inflammation are divisable into local, and general or constitutional. The local symptoms are, redness, heat, pain, and swelling.

dness This is generally the first observable phenomenon. Its intensity, and shade varies according to the degree, and stage of the inflammation, the part affected, state of the system, and nature of the cause. It is of every grade, from a light rose colour, to a deep crimson, or purple. The brighter hues attend active inflammation; the darker, specific inflammation, or is associated with a feeble action, or a gangrenous tendency. The redness may be in points, or streaks, or uniform as in blushing. The redness has sometimes an abrupt boundary, but generally it is imperceptibly lost in the surrounding healthy parts. It is remov=

able by pressure, the part becoming pale, but it soon returns. The rapidity with which it returns indicates the amount of capillary debility. When blood is extravasated the redness cannot be removed by pressure. The redness is due to the enlarged state of the capillaries, whereby they are enabled to contain more blood than in their healthy state. According to some writers the capillaries in health admit of but a single file of red globules, which pass through them so rapidly that they are not noticed. These vessels are stated by Kirk & Paget, not to exceed one thirtieth of an inch in length; the blood passes through them in not more than two seconds; but in inflammation their enlargement admits of several files to pass along as it were abreast, which added to the retardation of the circulation, enables them to be seen with the eye red, and distended. The redness is also increased by the formation of new vessels. According to Hunter the blood is also less acted upon by the capillaries than natural, and hence has more of the arterial hue than usual.

This is also observed in inflammation. An inflamed part has its temperature increased, which is sensible to both the patient and attendant, and may be detected by both the hand, and thermometer. Hunter says that

this heat never exceeds the temperature of the blood at the heart, and the further the inflamed part is from the centre of the circulation, the greater is the increase of heat, and vice versa. The rise of temperature on the chest is seldom more than one or two degrees; while on the extremities it amounts to five or six, or even more. Hunter has proved that it is difficult to freeze an inflamed part; this difficulty must be due to the continual extrication of heat, rather than to any thing peculiar in the heat itself. The cause of the increase of heat in inflammation, is referible to the increased quantity of blood in the capillaries, and an augmentation of the calorific function. Animal heat is naturally extricated over the whole body; its extrication takes place in the capillaries by the action of the nerves, during the change of the blood from scarlet, to purple, and also whilst it is changing in the lungs from purple, to scarlet. There is constantly going on in the capillaries a building up, and breaking down of the tissues of the body, which is attended with an interaction of oxygen, with carbon, phosphorus, &c; producing CO_2 gas, phosphoric acid, &c. It has been proved that this interaction is accompanied with the evolution of heat. In every case of chemical action, heat is

volved; thus in the combustion of wood &c, we have chemical action attended with the evolution of heat. The intra-combustion of the also furnishes another source of heat. Some writers contend that Co_2 gas is not produced in the systemic capillaries by the above mentioned union, but that simple carbon alone results from the breaking down of the tissues, which mixes with the blood, and is carried to the lungs, and is there acted upon by the Oxygen of the inhaled air, forming Co_2 gas. This view however is proved to be false, by the well known experiment upon animals, made to breath H, or N gases, which has no tendency to form Co_2 gas by union with carbon. In inflammation the Structural changes going on in the body are greater than in health; there is more extensive union between the oxygen of the air, and the Carbon, phosphorus, &c of the tissues; hence results the great increase of temperature. To indicate inflammation the heat must be continued. Generally the skin is dry, and hot, but it may be perspiring, and yet a temperature higher than natural, may be sustained.

This may be defined to be an uneasy sensation, dependant upon an altered condition of the

sensative nerves. Pain sometimes precedes the other symptoms of inflammation, being sometimes continued and uniform, sometimes continued but irregular. It is probably the most characteristic of all the symptoms of inflammation, but it is not unlikely to deceive. Pain is not always inflammatory; it may be attended by spasm, or simple irritation. It is very important to diagnose the pain of inflammation, from that of spasm, and irritation. In spasm the pain is violent from the beginning, often abating, but does not increase in violence. In inflammation the pain is slight at first, but hourly gets worse, until the inflammation terminates either in resolution, or death of the part. In spasm the pain is mitigated by pressure. In inflammation it is increased. In simple irritation — neuralgia for example — the pain in the first instance resembles spasm; it remits during its course, and often intermits wholly during intervals more or less prolonged. Some writers affirm that inflammatory pain is not only intermittent, but even periodic; others assert that it never intermits. Inflammatory pain gradually increases as the action advances, subsiding as it recedes. In neuralgia the pain comes on violently, and ceases in an instant, and after

sometime, it returns as violently as before. The characteristics of inflammatory pain are. It commences slight at first, but gradually increases; it is constant until the inflammation terminates either in resolution, or death of the part; it is invariably aggravated by sudden pressure, but gradual, and uniform pressure generally relieves it. The sudden cessation of pain in inflammation indicates the presence of gangrene. In inflammation of the bowels, the sudden cessation of pain indicates perforation, as the Autopsy, and general symptoms show. Pain in inflammation is sometimes latent. The latency of pain is almost always dependent upon some affection of the brain, whereby its impressibility is obtunded; thus in injuries attended with coma &c, pain is not felt, although active inflammation may have been established. In these cases the attendant will have to feel as it were for the patient. Inflammatory pain differs much in degree and kind. Persons of the nervous temperament, feel more pain in a given inflammation, than those of the other temperaments. In inflammation the pain varies from the slightest degree of uneasiness, to complete torment. There are many different kinds of pain, as smarting, itching, tingling, pricking,

piercing, sharp, lancinating, aching, throbbing, boring, tearing, pungent, burning, tensive, heavy, dull, contusive, &c. The nature of the pain frequently indicates the seat of the inflammation. Thus we have a dull aching pain in torch-ache. In Erysipelas it is of a pricking, tingling, smarting kind. In pleurisy it is sharp, and piercing. It is tensive in phlegmonous inflammation. Heavy in collections of fluid. Throbbing in tumors in which suppuration is about to take place. Lancinating in Cancer and neuralgia. Pain may become changed in its character in the course of a disease. Thus in the first stage of phlegmon it is tensive, in the second throbbing, and heavy when suppuration has taken place. The amount of pain depends upon the natural sensibility of the part, the degree of the congestion, and the tension, or pressure induced. Those parts which in health are endowed with but little sensibility - as tendons, ligaments, cartilage, and bone, -, become often very painful when inflamed. Generally speaking, external inflammations, and inflammations of investing membranes as serous, and fibrous membranes, are accompanied with more pain, than parenchymatous inflammations, or inflammations of lining membranes. Pain is sometimes

sympathetic; referred to a part at a distance from the seat of the inflammation. Such a part is either connected intimately by function with the other, or it contains the terminal expansion of nerves whose trunks pass through, or near the inflammation. Thus inflammation of the hip-joint gives us pain in the knee; abscess of the liver pain in the shoulder; inflammation of the kidney pain at the orifice of the urethra. In cases of amputation, the pain is often referred to the part of the limb that has been amputated. In the Rhinoplastic, or Taliacotian operation, the pain is referred to the place from whence the flap has been taken. The sympathetic pain in the knee in inflammation of the hip joint, is to be explained as follows - The inflammation impresses the nerves at the hip joint, which impression is conveyed to the Spinal cord; then it is transferred to the central ends or connections of the nerve fibres of the knee joint, through these the transferred impression is conducted to the brain, and the mind, referring the sensation to the part from which it usually through these fibres receives impressions, feels as if the disease was in the knee. This sympathetic action may actually induce inflammation at the knee. The case of amputation, and forming a new nose, are to be explained by the habit of the mind, to refer impressions received through the sensative nerves, to the parts from which

impressions through them nerves are, or were, commonly received. The pain in inflammation is due to the compression of the nerves by the distended vessels, more especially when lodged in the sound fibrous sheath; this pressure is very much increased by the effusion which takes place, particularly if the part inflamed be of an unyielding texture. The arteries of an inflamed part being both dilated, and elongated, make pressure upon the nervi-vasorum, which adds to the pain. That pressure is the chief cause of pain, is inferred from the fact, that it is invariably increased by it. Pain itself is sometimes so severe as to exhaust the powers of life. When an Organ intimately connected with the ganglionic system of nerves is inflamed, the pain produced is of a peculiarly depressing nature, and highly dangerous by continuance. The prognostic value of pain. The severity of pain in disease is not in proportion to the danger. The gravest diseases are not usually accompanied with more than moderate pain; many are entirely free from it, and those affections in which pain causes cries, as hepatitis, nephritis, neuralgia, rheumatism &c, rarely terminate unfavourably. In certain chronic diseases, intense, and prolonged pain, prevents sleep, and exhausts the strength of the patient. Deep seated pains, are generally more dangerous than superficial, and fixed, than movable. Very severe pains in the limbs

at the beginning of a disease indicates its future severity; those occuring at the decline of an affection are favorable. In phlegmasia the sudden cessation of pain, joined to a marked change of the countenance, indicates the approach of death.

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It may be defined to be a morbid increase of bulk in the whole, or a part of the body. Swelling results in part from the distention of the blood vessels, as is shown by the slight elevation of the skin in Erythema; also in part from the escape of fluids into the interstices of the inflamed part. The effused matters are of different kinds; thus we have serum, liquor sanguinis or fibrin separate, pus, and blood. The amount, situation, and form of the swelling, depends upon the grade of the inflammation, nature, and situation of the textures inflamed. Thus in serous membranes, the vessels being few permit of but little enlargement; and the effusions percolate through them so as to overflow externally, and thus accumulate in the most dependent parts of the serous sacks, causing dullness on percussion, and sometimes fluctuation in the chest or abdomen, and when of large amount distends those cavities. Mucous Membranes being more vascular in structure, the enlargement of their vessels causes thickening. Here the swelling is chiefly due to effusion in the submucous cellular tissue, so manifest in Coryza and cynanch; this effusion when

Serum generally passes off constituting what is termed flux: when more solid it subsides only when the secretion becomes opaque and fatty. The skin presents a great many varieties of swelling; thus it is sometimes diffused and hard as in Erysipelas. In aortic cases the hard swelling is in patches. In tubercular inflammations of the skin the swelling is hard and circumscribed. In scrofula it is confined to points. In blebs and vesicles the effusion is between the cuticle and true skin forming patches. In inflammation of the cellular tissue the swelling is diffused, Edematous, and pitting upon pressure when Serum is effused; being more tense when there is fibrin with the Serum, and when there is fibrin alone, it is hard and circumscribed as in phlegmon. Parenchmatous organs when inflamed also become swollen; thus the liver, kidneys, testicles, and lymphatic glands become much swollen - the swelling being soft or hard according to the substance effused. The lungs from their porous structure do not swell much; the effusion displaces the air in their cells increasing their weight, and rendering them more or less solid like liver - hepatization. When fluid is effused between the periosteum and bone, the swelling is more or less hard and circumscribed, and by its dissecting the periosteum from the bone causes its death. The denser the texture the less the swelling produced by the effusion. Swelling may

be circumscribed or diffused, prominent or flat, hard or soft, according to the circumstances of the case. At the beginning of the inflammatory action serum is effused; in its second stage the liquor sanguinis is poured out, or fibrin more or less separated from the serum; this fibrin is very plastic: in the 3rd the deposition of fibrin is continued, but its plasticity is impaired, and it is mixed with extravasated blood, which results from vascular lesion, and ultimately pus is formed. In an inflamed part we have centrally a soft fluctuating swelling, when there is blood and pus; surrounding this, a dense and unyielding circle, somewhat diffused, and generally less prominent than the centre, the result of plastic fibrinous effusion; externally to both, a soft pitting oedema, more or less extensive, according as the fibro-cellular tissue has been filled by serous effusion. The combined result is softening of tissue, impairment of cohesion, as well as enlargement. Swelling alone does not indicate inflammation. The presence of serum alone, or of blood alone, does not indicate for a certainty the presence of inflammation. We are only tolerably certain when we find pus. The presence of pus indicates that there has been inflammation somewhere in the body, but does not always point out its seat. Coagulable lymph alone demonstrates the certainty of inflammation. Swelling does not always accompany inflammation as is the case with the

eye. The tendency of swelling is beneficial or otherwise, according to the part affected. If it be internal, of delicate texture, and important in function as the brain, the swelling may prove to be highly dangerous. A part of but little importance may be in the vicinity of one which is of the greatest; and enlargement of the former may react upon the other injuriously. Thus swelling of the orbital cellular tissue will affect the eye-ball; of the submucous tissue may fatally close the mucous orifice, as the glottis. Swelling is sometimes a fortunate occurrence; as in subcutaneous cellular tissue, and the textures occupying the intermuscular spaces. The over distended vessels are relieved of a part of their burden, and an opportunity, varying according to the extent and rapidity of the effusion, is given to them to recover from their debility, regain their normal tone, and once more control the circulation of their contents. The swelling from Erysipelas, phlegmon, fracture, bruise, &c, are of this favorable kind. Therefore the amount of swelling cannot be taken as an index of the mischief done, and should not make us anticipate a gloomy prognosis. Swelling is not to be checked always but on the contrary sometimes excited. Swelling from the exudation of coagulable lymph around a suppurating tumour does good by its tendency to limit the suppuration. Swelling in loose and yielding parts leads generally to a favorable result; but when it takes place beneath fascia, and other

dense textures, it is said to be disastrous. The swelling in inflammation is due to the relaxation of the tissues of the vessels, whereby the fluid contents are extravasated. Sometimes the vessels are ruptured, and then blood is effused.

Acute inflammation is attended with a high grade of fever, denominated inflammatory or sympathetic fever. The production of this fever may in a great measure be attributed to the interruption of function, the irregular distribution of the blood and nervous energy, the alteration of the blood, and the sympathetic connection existing between the various organs of the body. The character of this fever varies with the grade and stage of the inflammation, the nature of the cause producing it, and the predispositions of the patient. Its typic grade is have the same diversities as other fevers. This fever may have the following relations with the inflammation. It may be produced by the inflammation; it may produce the inflammation; or they may both be produced by the same cause. When the inflammation has existed for some time, being accompanied with a weak and debilitated state of the system, and especially when there is at the same time extensive suppuration, we have a species of fever produced termed Hectic. This fever - Hectic - is most generally met with in Chronic inflammations. In this fever the circulation, and calorification primarily, secretion, and nutrition secondarily, are the functions that are chiefly deran-

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ged. The progress of this form is always slow, depending upon that of the producing cause. It sometimes ends in recovery, but more frequently in death.

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The blood in inflammation is characterized by a peculiar formation termed the buffy coat. This is a grayish or yellowish white, and sometimes greenish stratum formed upon the upper surface of the blood during its coagulation. The buff does not indicate the presence of inflammation for a certainty, for it is found to be present in both plethora, and pregnancy. When first formed it is soft, viscid, and often transcends; but when the clot has fully formed it becomes more tenacious, dense, elastic, diaphanous, shining, and strongly adherent to the clot beneath, which is depressed upon its upper surface, giving it a cupped appearance. The buffy coat consists of fibrin and liquor sanguis mechanically intermingled. The formation of this coat may be explained thus. When blood is drawn, the red corpuscles begin to subside - being the heaviest ingredient thereof - to the bottom of the liquid; their tendency to adhere together in rolls, or columns, like piles of coins, is greatly increased in inflammation; these piles adhere by their ends, and cluster; this they do in two or three minutes, and then quickly begin to sink: thus quickly sinking they leave about them a layer of leyico sanguinis, the fibrin of which coagulates, forming the buffy coat.

The evidence for this view is to be seen in Rich. Page 46 page. The thickness of this coat depends upon the degree of the inflammation, and the robustness of the individual. The size of the orifice from which the blood is drawn, and the shape of the vessel into which it is received, also influence the formation of the buffy coat. If the orifice be large, and the vessel be a cup, or some such shaped thing, we have the most favorable conditions for the formation of the buffy coat. In inflammations it sometimes happens that the blood first drawn does not exhibit the buffy coat, while the subsequent bleedings does. In inflammation the clot of fibrin is firmer than it is in health, owing to the fibrin being more highly vitalized. The normal proportion of fibrin in the blood is between 2.5 and 3: but in inflammation it is increased generally to 6 or 8 parts, but may rise to 9 and even 10 parts in the 1000. This increase begins with the inflammation, and ceases when it has begun to decline. The fibrin appears to be formed at the expense of the Albumen, as this ingredient seems to undergo a slight diminution. The transformation is effected by the agency of the Chyle corpuscles. Some writers regard these Corpuscles "as a pretty good representative of the proportion of fibrin in the blood".

At the commencement of inflammation the secretions are increased in quantity; if the inflammation increases

they become suspended; if it continues to advance they are restored, becoming Abundant and altered in their character. Copious secretions frequently relieves the violence of the inflammation. The secretions instead of being bland, are mild acrid, irritating, and even excoriating. They are changed in colour, the change being due to the admixture of Albumen, blood, and pus. As the inflammation advances the secretions become mixed with other products.

This is said to take place when the inflammation subsides after having proceeded only to simple stagnation of blood. The inflammation begins to subside; the circulation is restored, and the effused matters - if there be any - are reabsorbed. The part returns to its former condition, leaving no trace of injury behind. Resolution may occur spontaneously or in consequence of treatment.

It differs from resolution only as to time; it being sudden and rapid, taking place in a few hours.

It sometimes relieves inflammation by removing the distention of the vessels; thereby allowing them the time, and opportunity to recover their tonicity, and contract upon their contents. It acts mostly as a depletive agent, and nature

frequently makes use of it to relieve congestion.

This is always partial. Paget says that the conditions
trophy which give rise to it are three, namely - 1. The increased exercise of a part in its healthy functions. 2. An increased afflux of blood. 3. An increased accumulation in the blood of the particular materials which any part appropriates in its nutrition, or its secretion. A continued irritation may produce hypertrophy by causing a determination of blood to the part. Hypertrophy of the lungs and liver occurs after long-continued congestion from disease of the heart. Inflammation of one organ will produce hypertrophy of its fellow by forcing it to perform a double function.

This may be general or partial. Chronic inflammation
phy of the stomach, or the intestines, may produce atrophy - in the first case by preventing the food from being digested; in the other by preventing its being absorbed after it has been digested. Inflammation of the mesenteric glands may also effect the same result. Inflammation of an organ by the pressure it produces therein, may prevent a due supply of blood to the organ, thereby producing atrophy. This is the case in Cirrhosis of the liver, pleuro-pneumonia, Chronic pneumonia, and phthisis.

ecretion Inflammation of mucous Membranes sometimes terminates

with increased secretion, which has been termed a flux. This is especially the case with the mucous Membrane of the intestines.

Serum is the first fluid that is effused in inflammation, producing serous flux or dropsy, or edema, according to the Anatomical relations of the inflamed tissue. The effused serum forms the more or less boundary of the diseased action in inflammations, and fills upon pressure. Serum may be effused in the Areolar tissue of the body constituting edema, or into any one of the serous sacks. A very small quantity of serum effused into the submucous areolar tissue of the glottis, may close the chink, or rima glottidis, and thus suffocate the patient to death. Serum may be effused in large quantities into the pleura and other serous sacks. The effusion into the pleura may be of such a quantity as to compress the lung and thereby prevent the ingress of the air. If this condition of the pleura prevail on both sides the result is sure to be disastrous.

Coagulable lymph is also effused during inflammation. It is a plastic substance, having the power to coagulate and form a living tissue. It differs from fibrin, in having the power to become organized when placed in contact with a living tissue. It is effused in a soft semi-fluid state, mixed with more or less serum, in the form of lymph sanguinis. After effusion, the serum is absorbed, and the lymph left remaining, which ultimately

becomes firm and solid. Coagulable lymph when effused in the air cells of the lungs solidifies forming hepatization of the lung. When effused in the cellular tissue in phlegmonous inflammation it also becomes solid and dense. When effused on the surface of membranes, it becomes organized there, forming adventitious membranes of variable thickness. We have this taking place in Croup &c. When lymph is effused between the opposing surfaces of membranes that are continually in contact with each other, it causes them to adhere, as is the case with the pleura, pericardium &c. Coagulable lymph is sometimes deposited upon the surfaces of membranes, as small granular bodies. We have this occuring in Iritis, and in Organic diseases of the heart. It is the substance that unites the edges of wounds together when they are made to approximate each other; and administers to the new growth when there is solution of continuity. Coagulable lymph in the form of liquor sanguinis is sometimes effused into serous cavities, and the serum instead of being absorbed leaving the fibrinous portion behind to glue together the sides of the cavity - remains, and by its distending effect, the uniting portions of the lymph are drawn out, forming bridles of adhesion. The effusion of lymph is generally a salutary instead of a detrimental consequence. It does good by circumscribing the inflammation, limiting it to a given extent, as in pleurisy

pericarditis &c. By limiting the extent of the inflammation, it prevents extensive suppuration from taking place. Coagulable lymph when examined with a microscope soon after its effusion, will be seen to contain numberless granules, multitudes of fibrils, and another set of bodies called exudation corpuscles, which are formed of an aggregation of granules covered by an envelope. Coagulation depends upon a multiplication and interlacing of the fibrils. After coagulation has taken place, numerous red points are seen, which unite and form lines, which inosculate so as to form a net work. These lines join the capillaries of the contiguous structure, and begin straight way to convey blood into the newly formed tissue. These new vessels are said to be formed after this manner. The exudation corpuscles arrange themselves end to end - their arrangement being bounded and shaped by the position of the fibrils - into lines, which as above stated inosculate with each other so as to form a net work; the adherent ends of these corpuscles are then absorbed away, leaving perfect canals which join themselves to the capillaries of the contiguous tissue forming blood vessels. If the fibrin be deficient in vitality, or unfavourably placed, the process of organization may never begin, or having begun may never be completed. Hence it is that we sometimes find in the body solid products without life; and others although living, are

altogether abnormal in their character. It is probable that tubercles are formed in this way. The organization of lymph forms different structures according to its situation. Thus in cellular tissue, it is cellular; between divided tendons it is fibrous; and between broken bones, it is bony. Some tissues when once destroyed are never renewed, as the muscular, and the proper cutaneous tissue. The length of time required for the effusion of coagulable lymph and its organization is variable under different circumstances. It is often effused very early in the course of the inflammatory action, as from 4 to 6 hours, and it becomes organized in from 24 to 36 hours afterwards. Sometimes however it requires many days before it becomes organized. The rapidity and perfectibility of the organization of lymph depends upon the degree of vitality of the fibrin; this depends upon the grade of the inflammation, strength of the patient &c &c. If inflammation goes beyond the stage at which fibrin is effused mucous pus exudes instead of fibrin.

Pus may be regarded as a changed condition of the blood, rather of the liquor sanguinis of the blood, consisting of globules, and small molecular particles more or less numerous, contained in a thin serum. These globules are supposed by some to be degenerated fibrin. The inflammation is

necessary to the first formation of pus, but when once formed, it may be continued to be generated by a less amount of inflammatory action. Pus is an opaque greenish or yellowish white liquid, of a creamy consistence, little odour, coagulable by Muriate of Ammonia, not prone to putrescence, of a sweetish and mawkish taste, insoluble in water, heavier than it, and of a sp: gr. varying from 1030 to 1033. It is composed of water, deutoxide of protein forming the cell wall, tritoxide of protein and albumen in solution, fat, osmazome, uncrystalline matters, and the same salts as those of the blood. Pus globules have the following characteristics. They are very much like the exudation corpuscles, being however larger, and more constantly provided with a cell wall, and nucleus, in addition to granules and molecules; they are spherical generally, but sometimes they are oval; their cell wall is commonly opaque, and rough, being studded with small granules. Acetic Acid renders them transparent, bringing into view their nucleus. If a pus globule be put into distilled water, it dilates by endosmosis, becoming double its natural size. According to Mr Addison they measure from $\frac{1}{2000}$ to $\frac{1}{500}$ of an inch. They also differ from exudation corpuscles in being more distinctly vesicular, and containing a fluid, as well as granules. A solution of Caustic Potash dissolves their cell walls, setting their contents free. Another distinguish-

-thing characteristic of pus globules is their want of cohesion; and they impair the consistence of fibrin, or mucus with which they are combined, in the proportion of their predominance. Pyogenia. Some writers think that pus is formed in the arterial system, to be exhaled in the inflamed parts; others that it can only be produced when it is found to exist. Among the latter, some have regarded pus as proceeding from the broken-down parts where the suppuration is taking place: others have considered it the result of a chemical combination between the various products of the part, and particularly between the lymph and fat. The above opinions have been abandoned, and pus is now considered as the result of a morbid exhalation from the same organs which produce the natural exhalations. Gehen believes rightly I think, that the pus globules are formed by the degeneration of the exudation corpuscles. Suppuration is accompanied by an increased oxydation of the protein, whereby it passes from the state of solid deutoxide, to that of tritoxide, which is readily soluble in water, or serum. Pus when first exhaled does not present the appearance and consistence peculiar to it, till it has remained for a certain length of time upon the organ which furnishes it. Pus when considered in itself, presents varieties relative to its physical, and chemical properties, and its action upon the animal economy. Its quantity depends upon the extent of the suppu-

=urating surface, the period of the disease, and many other circumstances. Haller says that more pus is formed during the night than the day. The pus formed in healthy inflammations is termed laudable or healthy pus, and has the following characteristics. It is light-coloured, smooth, bland, and homogeneous. According to Hippocrates it consists of yellowish globules, diffused in serum. If healthy pus be allowed to stand it separates into a solid, and liquid portion, the former sinks to the bottom, the latter lies on the surface and swims upon the top. There are various modifications of pus: thus it is termed Ichorous when there are few globules; the serum predominating. Sanious when mixed with blood. Scrofulous when it has a curdy appearance. Specific when it is impregnated with a subtle virus, as the venereal or vaccine. When pus has collected about the Alimentary canal it has a horribly fetid odour. The same thing occurs in collections of pus about the genital organs of both sexes. This fetor is partially due to the action of air upon the pus. All tissues are not equally disposed to the formation of pus; the most resisting are tendons, cartilages, and aponeuroses. Inflammation does not always produce pus, but whenever it is found it indicates either previous or existing inflammation. It does not necessarily follow that the inflammation has had its seat in, or near the place, where the pus has been found;

for the inflammation may have existed elsewhere, and the pus being absorbed, may have been deposited at a distance from the seat of the inflammatory action. In the above case we will have what has been termed consecutive or Metastatic abscess. As the pus may have granulations forming an abscess by congestion. When pus has become mixed with the blood it is circulated to every part of the body, into the most vascular of which it is deposited, as the liver, lungs, &c. Pus may be formed on the free surface of a part, and be from thence discharged; or it may be formed in the interior of a part, and be lodged there. In the latter case it collects and forms an Abscess. If pus be collected in a loose yielding tissue, as the areolar, the inflammatory symptoms are somewhat relieved by the deposition. If on the contrary the tissue be dense and unyielding, as the osseous, fibrous &c, the inflammatory symptoms are increased in severity. Generally pus is circumscribed by a barrier of fibrin, which limits it to a given space: but sometimes no barrier exists; and then the pus instead of collecting so as to form an abscess, is infiltrated among the tissues causing great distruction, and endangering life by ulceration, and gangrene, as is the case in phlegmonous Erysipelas.

The access of air to a recent wound will make all the difference between adhesion, and suppuration. In this case the air acts as a stimulant increasing the inflammation. Hence if air be permited to act upon an inflamed pleura we will have Empyema generated. Inflammation generally abates with the formation of pus. Extensive and long continued suppuration is apt to produce Hectic fever, or Constitutional irritation. In diffused suppuration the constitutional symptoms are those of irritative fever; a condition intermediate between Hectic, and inflammatory fevers. The time required for the formation of pus is variable. Sometimes it takes place in a few hours, then again it takes weeks for its formation.

ation This is the process whereby an ulcer is formed. It results from acute inflammation, and is always situated upon the free surface of tissues. Until lately the theory of Hunter prevailed, namely - that it was ulcerative or progressive absorption. It cannot be denied but that absorption does produce some part of the effect, but it is very limited; the chief part of the process depends upon vitality of the changed and suppurated texture, which then undergoes molecular disintegration, and being reduced more or less

to a fluid form, passes away along with the purulent discharge. If the debris be prevented from escaping some of it may be absorbed, but as above stated it is generally washed away. There is however a difference between absorption of the debris and the action which caused it to become so. The steps of the process are - 1. inflammation with suppuration - 2. softening of the inflamed part - 3. its reduction to a fluid - a vital act - more or less complete - 4. disintegration. 5. mixture with pus and removal in the common discharge. The arguments in favour of this view are - 1. Ulceration is an immediate result of inflammation, or is coexistent with it. During inflammation absorption is almost entirely arrested. When however the inflammating action has subsided absorption is much increased. 2. Certain structures resist all stimulants to absorption, yet are very prone to ulceration; these two actions one opposed, the other embraced, by the same part, and at the same time, cannot be otherwise than dissimilar. Malignant tumors for example, will not disappear by absorption, yet they ulcerate readily and spontaneously. Cartilage may be long and much pressed upon by tumors without yielding to absorption; yet if inflamed they ulcerate fast and readily. 3. In the case of virulent inoculations as in the case of the primary venereal ulcer, the system is

usually thought to be safe during the formation of the ulcer. The part in Syphilis inflames and ulcerates; and if Hunters theory be true, the virus should be, from the beginning of the ulcer, poured into the circulation, along with the debris of the texture. The experiences of the practitioner however tell him a different tale, namely - that there is at this time but little absorption, and that the judicious application of caustic at this period will arrest the disease. Ulceration being a rapid process the system should be involved long before the fourth or fifth day; but yet it is not so. 4. Ulceration is more active during active inflammation, when absorption is least so. 5. Passive venous congestions are directly opposed to absorption, yet favour ulceration. 6. Absorption is proved to be feeble during acute ulceration, by applying a strong solution of a narcotic to the part. The application may be made with comparative impunity. 7. A part to be absorbed is generally supposed to be reduced to a more or less fluid state. This change is not thought to be due to the absorbents, but to result from simple disintegration. If the ulceration be on a free surface the debris escapes with the pus; when on a surface previously unbroken, the discharge accumulates in the form of a pustule or small abscess; when this breaks the ulcerating surface is then exposed.

Ulceration is influenced by the degree of inflammation, and the amount of vitality of the part. The greater the inflammation, and the less the amount of vitality of the part, the more rapid and extensive will be the ulceration. In ordinary inflammation and vital power it forms an Acute ulcer. When the inflammation is higher than common, with ordinary vital power, we have an inflamed ulcer. All advancing ulcers are inflamed but this has inflammation in a higher degree. When the inflammation is of an ordinary degree, with a want of vital power, the ulceration is very rapid, and is termed phagedenic. When the inflammatory action is increased, and the power impaired, one or other, or both, the part dies en mass constituting gangrene. Ulceration in bone constitute Caries. When ulceration advances rapidly it is termed acute, when slowly it is termed chronic. An ulcer does not commence healing until the inflammatory action has subsided. When the healing flags, and is imperfect, it is called a weak ulcer; when it wants the power of reparation it is termed indolent. It is called irritable when the healing is interrupted by inflammatory accessions. The cause of ulceration is the loss of vitality of the part, produced by super-excitement, or any other cause capable of depressing its na-

tural energy. It very often occurs when acute inflammation supervenes upon chronic. An ulcer usually begins at a point, and spreads until it reaches its limits. It is generally attended with a pricking pain, which varies according to the tissue, and variety of the inflammation. Some tissues ulcerate sooner than others - thus the skin, areolar, and Mucous tissues, sooner than the vascular, nervous, and fibrous tissues. Ulceration sometimes divides blood-vessels, but hemorrhage is prevented by the timely effusion of lymph which plugs them.

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lication.

Gangrene denotes the process of dying. It is that state in which the death of a part is threatened, but has not actually occured. The signs of gangrene are - change of colour, from red, to a dark or livid hue - the swelling becomes less tense - Cessation or abatement of pain, heat, sensation, and temperature. These signs are due to arrest of circulation. In gangrene the part is passing from the control of vital to chemical laws. An offensive odour accompanies gangrene, and the surface of the gangrenous part is studded with phlyctenæ; these phlyctenæ are filled with putrid serum, and have the scarf-skin detached for some distance around their bases, so that they can by pressure be made to slide from place to place. When gangrene is confined to the inflamed part it has an abrupt border; but when the inflammation, and injury that lead to it have but been severe, and the

vitae power of the part lessened - and when in consequence, gangrene is to spread - the discoloured margin is gradually lost in the surrounding palenes, and dark streaks are seen shooting diffusedly upwards in the part. Mortification. This is actuae death of a part. Its signs are coldness, and insensibility. The part is shrunken and almost pulpy to the touch; crepitates distinctly, from its containing liquid and gas, the result of putrescence. Here the vitae action of the part has yielded to chemical laws. If air be allowed to act upon a mortified part it becomes black. When a part of limited extent has mortified it is called a slough, and the process by which it is effected sloughing. When a part has mortified it becomes foreign matter, and nature attempts to free herself of it; by establishing an inflammatory line between it, and the living part. This line is at the margin of the living part, and has surrounding it upon its exterior circumference a number of small vesicles, which burst and discharge pus, constituting thereby ulcers more or less deep, which run into each other forming an ulcerating line of separation. The sinuses thus formed deepens more or less rapidly according to the structure of the part it has to penetrate. The direction of the ulcerating line is generally outwards. In mortification no hemorrhage takes place because of the vessels being plugged up by the timely effusion of lymph. Mortification

of bone is termed Necrosis. The constitutional symptoms during the inflammatory action, before gangrene has been established, are those of inflammatory fever; when gangrene has taken place we have those of constitutional irritation. This change in the fever is owing in a great measure to the absorption of debris.

This take place in inflammation, and is caused by the effused fluids that have taken place in its structure. The density of the tissue is sometimes so much diminished, as to enable us to pass the finger through it, almost without resistence.

This seldom results from acute inflammation; it often attends chronic, and is frequently left behind when the inflammation ceases. In these cases it results from the organization of coagulable lymph. An indurated part is thus characterized. It is compact, and resists every effort to indent, rupture, or divide it; It is also tenderous when struck, and crepitates under the knife.

They are divided into two classes. 1st predisposing. 2nd Exciting. The predisposing causes are - the inflammatory diathesis as dependent upon too rich blood. the sanguine temperament &c. Debility of organs whether original or acquired is also a predisposing cause. The exciting causes are. Mechanical, chemical, and vital irritants. The cause may be said to be in a

few words, the same that induced irritation, only of greater degree, or longer continued.

Inflammation is generally extended first of all to the neighbouring parts. It extends most readily through identical and continuous structures. Certain textures are peculiarly prone to such extension as the skin and mucous membranes. Next in point of readiness, is the extension by contiguity; the textures are here connected by juxta position; and usually, the more loose the intervening texture, the greater the facility of extension. The more rapid the inflammation in the part first attacked, the more likely is it to extend to the neighbouring tissues; its advance is unopposed by attendant change of structure. The extension of the inflammatory action may be remote - that is the part secondarily involved is at a distance from the original site of action; and the intervening part are unaffected. This may be effected by the blood which in inflammation is always altered and highly stimulating; or by the agency of the lymphatics, as is the case in dissection wounds. The inflammatory action may be extended by nervous agency; in other words by sympathetic action.

It may prove fatal in six ways. 1. It may suspend the action of the organ in which it has its seat, the performance of whose function may be essential to life, as the heart, &c. 2. An inflamed organ may prevent the action of a dependent organ whose action may be essential to life. Thus inflammation of the glottis by its consequent swelling may prevent the entrance of air into the lungs producing fatal asphyxia. 3. It may produce death by Syncope. 4. It may produce typhoid fever by the absorption of debris into the circulation. 5 It may prove fatal by generating hectic fever. 6. It may be so great, or continue so long as to produce fatal collapse.

There are two varieties the Acute, and Chronic. The acute runs through its course with great alacrity; but the chronic requires weeks, or months to accomplish its result. Chronic inflammation has a slow course, seldom reaching to suppuration, or ulceration; and still more seldom to gangrene. It is particularly favorable to fibrinous organization, and subsides slowly, and unsatisfactorily, because it is not only tedious, but imperfect. Acute sometimes becomes chronic, and vice versa. The symptoms of chronic inflammation are nearly the same as those of the acute, but are much milder,

and more gradual in their exhibition. The local symptoms are gradual enlargement, with but little tension, and induration caused by the organization of the effused fibrin. The constitutional symptoms are proportionally mild. They approximate the hectic. When suppuration occurs they really become hectic. The symptoms become typhoidal upon the occurrence of gangrene. If active inflammation should supervene for a time, inflammatory fever may be induced, but more frequently the irritative form is established. The results of Chronic inflammation are, gradual change of structure, and occasionally suppuration, ulceration, and gangrene.

ent This is divided into two heads, namely- preventive and curative.

ive 1. Remove the cause during the period of incubation. The removal of the cause is often of itself sufficient to prevent the establishment of inflammation; and even when when it has been established, the removal of the peccant matter greatly reduces its violence, and aids the cure. The effect will not disappear as long as the cause remains; hence its removal becomes a matter of necessity. The practitioner has to rely wholly upon his judgement, as to the best method of effecting the removal. The period of incubation

is the time that intervenes between the application of the cause, and the manifestation of its result. It is of variable length, being from two hours, to as many days, or even more. 2. Prevent dilatation of the capillaries by local repellents. To effect the above design, we may use astringents; cold water, ice, bandages &c. 3. Remove irritation by soothing applications. The part is to be kept rigidly quiet, and so placed as to favour the venous return, and oppose arterial influx. Both the body and mind should be placed and kept at rest; low diet, with abstraction of all stimuli, whether local or general, must be rigidly enjoined. By some hot water, or its steam, is constantly applied as a soothing remedy; others use cold continually, and think it preferable. Cold is much better than heat, and should always be used if possible; but if it cannot be applied constantly, we should use them not heat, as the irregular application of cold is attended with reaction. Cold may be constantly applied by covering the part with a dense layer of fine lint, which has a thin stripe of the same material communicating, by siphon-like, with the lint on the part, and a water-vessel placed in its immediate vicinity.

Remove the cause if this has not been previously done. Remove all sources of irritation whether operating locally or generally. The afflux of blood to the seat of inflammation should be diminished, in order to unload the

congested capillaries. The remedies for effecting this design are various, among the chief of which is general and local bleeding.

General blood-letting acts both as a sedative and derivative. As a sedative by diminishing the amount of blood in the system, the action of the heart and other organs, and by depressing the nerves influenced. As a derivative by unloading the vessels of the part, and stopping the afflux. The blood is also altered in quality; thus the quantity of the red corpuscles which act as excitants, and of the fibrin is diminished. This is a very grand remedy, and should not be resorted to unless the inflammation be very acute, and the constitutional symptoms demand it. It is very easy to take blood from the system, but very hard to replace it. A small bleeding at the commencement of inflammation will often arrest it; but large, and frequently repeated bleedings will wholly fail, after it has existed for some time.

Local blood-letting as by cups and leeches, act both as a sedative and derivative. They are resorted to when the inflammatory action has subsided in a measure; when there is much debility; when the inflammation is trivial in itself, and situated in a comparatively unimportant organ; and when the patient is at either extreme of age. They should not be applied to the inflamed part, as they would increase the inflammation, but rather at a distance from it. There are also other modes of local

bleeding, as by punctum, scarification, and incision. They are sometimes made in an inflamed part, and they do much good by relieving the congestion of its vessels. The incisions should not be very long or abundant, as injury would be said to result therefrom. In every case of blood-letting, whether general or local, we should recollect that there is a "modus in rebus".

We can deplete indirectly by the use of cathartics, diuretics, &c. They act by inviting a flow of blood to the alimentary tube, and kidneys, and by withdrawing from the blood the watery part thereof. They also exert a derivant effect in favour of the part inflamed, by bringing an unusual amount of blood to the intestinal tube, and kidneys. Cathartics are further of use by opposing assimilation, thereby calling off the nutritious supply from the circulation; thus tending to maintain the wished for depression of the system. Cathartics besides being evacuants, are also sedatives. A common dose of salts makes a person pale, and cooler in body and mind.

Mercury is much used in the treatment of inflammations, for the purpose of diminishing the plasticity of the blood, of controling, or preventing the effusion of coagulable lymph, of bridling adhesive inflammation, and of removing the lymph that has been already effused. Mercury when given in large doses acts as a sponge; in

small does it acts as a tonic and astringent to the capillaries. "Mercury stops inflammation by the same means in one case as it produces it in another, - it contracts the Capillaries. If given in too large quantities it produces one Action - Contraction - as is the case in ptyalism. Then the inflammation - relaxation - is the secondary result of the contraction. The same principle is illustrated by the action of cold, which at first contracts, but at last destroys the power of the Capillaries, so that relaxation, amounting to inflammation - Chilblain - takes place. When we wish to get the specific effect of Mercury we must give it in small doses, frequently repeated. It is used in inflammatory affections as a subsidiary to blood-letting; for if given alone it is said to fail in its action, and harm is done instead of good. The administration of Mercury is to commence when after blood-letting, and to be continued until the gums have been touched. Should the diseased action continue notwithstanding the sufficient ptyalism, we should continue to give it in reduced doses, so as to keep up its effect upon the gums, when generally the disease is seen to subside gradually, and finally disappears.

The tinct: of Iodine is given for the same purposes as Mercury. It has the advantage of being both indicated, and capable of being used, when when Mercury is contra-indicated. It has the same action upon the human economy as Mercury. "Both Mercury and Iodine remove

morbid growths by starving them, which they effect by contracting the capillaries, and not by increasing absorption, as has commonly been supposed".

Oil of turpentine is sometimes given for the same purposes.

"This is a stimulant narcotic, and has no sedative principle whatever".

It is thought by many that its stimulant principle - narcotico - powers sedative indirectly. The relief from Opium was said to be the sedative effect subsequently to, or produced by, the exhaustion of the stimulus; but this is not the case, for the morphia alone produces sleep just as certainly; thus realising the long-sought consideration of an unstimulating opiate. Opium is a useful adjunct to blood-letting in all inflammatory diseases. It should not be given before blood-letting has been performed, since by the action of its stimulant principle it does use the constitution, and has a tendency to increase the disorder.

It is generally given after large bleedings to prevent excessive reaction, and quiet the irritation induced by the abstraction of blood. It is also good because of its narcotic principle to relieve pain.

These remedies are Anodyne, and sedative, and are sometimes used as antiphlogistics in the treatment of inflammatory diseases. Aconite has great power in loosening and softening the pulse. Both Aconite and Belladonna must be given in small doses, or else they

may result in pneumonia. They are particularly useful in Erysipelas, and Rheumatism.

They act as sedatives by diminishing the action of the heart, thus diminishing the flow of blood to the part. They also act as diaphoretics.

Tartarized antimony is the best of the nauseants, and when given properly proves powerfully antiphlogistic. Antimony besides being sedative and diaphoretic, is when given in doses of from 1/8 gr: to one grain, still more truly antiphlogistic, resembling Mercury in its action upon the capillaries. It reduces the force of the pulse considerably below its normal standard, and is very favorable to absorption.

Diet. Food is to be given sparingly, and it is to be of a non-stimulating, but nutritious character, so long as the diseased action remained unbroken. Drink. This should be bland, simple, and cooling. Acidulous drinks are generally the most refreshing. Rest. There should be perfect rest of both body and mind. Air. There should be a free supply of good air.

Rest and position, should both be carefully attended to in the first instance, as much depends upon them.

There are Medicines which, when applied to a tumefied part, cause the fluids, that render it tumid, to recede, as it were, from it. Among these agents we find cold, heat & moisture, pressure, &c. Cold is chiefly used as a preventive. If it be used after the inflammatory process has fairly set in, much harm will follow. For it then opposes exudation, and so prevents the natural relief of the over-burdened vessels; it contracts the parenchyma, rendering it less yielding than it would otherwise be, to the effusion which does occur, and so favors tension and consequent aggravation; and during the progress of the action it must, by its directly sedative influence, depress the vital powers of the part. So favoring the supervening of action and pain, and hurrying on the former to its extreme results of suppuration, ulceration, and gangrene. Cold should be used diligently during the period of incubation, but we are to desist using it as soon as the signs of inflammation appear. When the inflammation has fully subsided, leaving the part weak, lax, and swollen, with its blood vessels congested, we may again resort to the use of cold, but it should be applied moderately, otherwise it will prove injurious. Heat & moisture, plainly unsuitable during the stage of incubation, are as plainly preferable during the inflammatory action. They are grat-

eful to the feelings of the patient, allaying pain, heat, and tension. They act by relaxing the parenchyma of the inflamed part, thereby favouring copious exudation from the blood-vessels which relieved their undue distention, and enable them to contract, and resume their tonicity. Heat & moisture cannot be used during the decline of the inflammation, without producing decided injury. They should be used diligently during the active stage of the inflammation, but should be gradually abstained from as soon as it has begun to decline. How often have we seen chronic action, with lesion or suppuration, produced by too much poulticing! Heat & moisture may be applied in the form of Epithem, or fomentation. These forms may be either simple, or medicated according to the views of the practitioner.

These are agents, which, by producing a modified action in an organ or texture, remove the morbid condition of some other organ or texture. They act by directing the nervous, and circulating influence, from the inflamed part, to the part upon which they act. Those that implicate a great extent of surface, and are most prolonged in their action, are decidedly preferable.

There are remedies that produce the absorption of the effusions that have taken place. "They act by restoring tone to the dilated and weakened capillaries, arousing the slumbering circulation to normal vigour, and stimulating the absorbents to an exaltation of their function; it may be, mechanically supporting the part, and preventing return of both congestion and effusion". Among these remedies we have friction, simpler and medicated; plaster, with or without bandaging; mercury in the form of either Epithem or inunction.

Restore tone to the weakened capillaries &c by mechanical support, cold affusions, and frictions with roborant liniments.

These are sometimes used, as Nitrate of Silver, Preparations of Iodine, and Mucilage of Gum Arabic.

Nitrate of Silver acts by substituting a new and healthy action in the inflamed part, for the old Asthenic one.

Tinct: Iodine This should not be applied to the raw surface, but rather to the skin. If very strong it acts as a vesicant, so we should be cautious in its use.

Gum Arabic acts by sheathing the surface of the inflamed part, and protecting it from the action of irritants.

Brandy, Ether &c are all local stimulants, and can be used with decided advantage.

An

Inaugural Dissertation

On

Syphilis

Submitted to the Examination

Of the

Provost, Regents & Faculty of Physic

Of the

University of Maryland

For

Degree of Doctor of Medicine

by

George McAlpine

of Mississippi.

March. 1850.

To

John R. W. Dunbar M. D.

As

A mark of respect

For

His attainments And Skill in Medicine,

And the Generous Sentiments of his Heart.

This Dissertation

Is Affectionately Dedicated

By

His Friend And Pupil

Geo. A. McAlpine

This disease has probably existed from the most remote ages, At the present day there exists no well authenticated observation in the Annals of Science, which proves that Syphilis can arise Spontaneously; All the experiments made to produce it de novo have completely failed; And a careful investigation of the disease proves, on the contrary, that it has been contracted from a Person who has himself contracted it of another, and it is in this way that the Disease is now propagated. The exact date of its outbreak is unknown, we are in ignorance of those circumstances which first gave it birth or in what country it first made its appearance.

Deeming it unnecessary to state the various theories which the Fathers of Physic entertained on the origin of venereal

Diseases.— I proceed to describe Syphilis practically.

The term Syphilis is derived according to Fallopius and Swediaur from the Greek συν, with, and φιλια, love; or according to Bosquillon from σιφλος, deformed or disgraceful; Other Authors state that it is derived from σὺς, hog, and φιλειν, to love.

Syphilis is a virulent affection the essential character of which is its dependence upon a Special cause, or a distinct virus.—

A chancre or Syphilitic ulcer is a specific ulceration depending upon a Special and identical Cause; Commencing at an uncertain period varying from a few days to Several weeks after the impure venereal Intercourse, first appearing as Small pimples, Excoriations, or ulcers,

preceded usually with an itching in the part; appearing on some part of the genital organs, most commonly on the internal surface of the prepuce, the corona glandis, the glans, or on the frænum; and occasionally on the external surface of the prepuce, skin of the penis, scrotum or thighs in men; and in females on the internal or external surface of the labia pudendi, on the clitoris, the nymphæ, in the vagina, or on the thighs.

The anatomical characters of chancre at its commencement resembles the artificial chancre produced by inoculation, by taking the pus from the chancre during its ulcerating period and introducing it under the epidermis of any part of the body. During the first

Twenty four hours the inoculated point becomes red, in the course of the second and third days the surrounding parts are slightly swollen and assume a papular appearance, On the third or fourth day a fluid which is more or less transparent is observed beneath the Epidermis and a distinct vesicle can be seen where the papula previously existed, About the fifth day the vesicle assumes a pustular character, with a distinct depression in the centre, At this period, it resembles the small pox pustule; The red areola which has been hitherto gradually augmenting in intensity now as gradually fades away, and the cellular tissue which was slightly oedematous becomes infiltrated with plastic lymph, On the sixth or

Seventh day the pustule is observed to be wrinkled in consequence of the contents becoming thicker, and ultimately a crust ~~forms~~ takes the place of the pustule, this crust finally falls off leaving an ulcer in depth equal to the thickness of the skin: The ulcer is generally circular, the bottom of it is covered with a whitish pulpy substance or false membrane, which adheres so firmly that it is with difficulty wiped or washed off. If viewed by means of a microscope the margin will be found dentated and covered with a secretion similar to that seen at the bottom of the ulcer.

The pus of a chancre varies in consistence, but is usually of a thin serous and sanguineous character. It has been found by examination

with the Microscope to contain
Animalcules.

The diagnosis of chancre Some-
times very difficult, absolute relia-
nce cannot be placed on the history
of Patients, the Physician may
often be misled, when the Patient
has reason for concealing the
truth: In the female the irri-
tation of the menses or some other
cause is alleged to explain the ulc-
erations about the genital organs.
But in medico-legal inquiries
(when it is absolutely necessary to
decide upon the nature of a sore,
by inoculation we are certain of
arriving at the truth.

The prognosis of simple chancre
is favourable, in a good constitution
it has a regular but constant course;
The situation of chancre may have

great influence in retarding the cure. For instance should a Chancre occur on the Frenum, or margin of the Prepuce, when a Natural Phimosis exists, will be prevented from healing by the rupture of the cicatrix when erection occurs, again cicatrization will be often unusually retarded if the chancre should occur in the Urethra, for there they are constantly bathed by the urine; or when situated at the margin of the Anus, or within it, becoming irritated by the distention of the Gut during the passing of Faces, consequently retarding cicatrization.

Patients presenting a number of Chancres are as quickly cured as those who have but one Sore, cicatrization going on with equal rapidity in all.

Simple chancres occurring in young Persons not addicted to excess of any kind, particularly to the use of Spirituous liquors, not exposed to bad or insufficient nourishment, and residing in a healthy situation, under these circumstances it is probable when left alone, the chancre will heal perfectly without treatment in time varying from three to five weeks; and when properly treated, perfect cicatrization may be obtained in from eight to ten days.

Bubo. Bubo is derived from the Greek Boubon, the groin, because they most frequently happen in that part; It is a circumscribed swelling of a lymphatic vessel or gland, with or without suppuration; A chancre of the lymphatic vessel or gland.

Venereal bubo, implies a bubo which follows sexual intercourse.
Syphilitic bubo is a term applied to those swellings which are the consequence of primary Symptoms, or may arise from Constitutional disease Generally termed Lues Venerea.
The first indication of a bubo is afforded by a pain in the part, attended by heat and swelling, occasionally there is fever; The earliest Symptoms Generally show themselves during the Second week of the existence of chancre, very rarely if ever meets with them during the week following Contagion. A Bubo may terminate by resolution, by Suppuration, or it may take on an indolent character, becomes indurated, and is unattended with pain, It interferes however with the functions of the

part, and may terminate in scirrhous degeneration provided there is any predisposition on the part of the individual. Again though rarely a Syphilitic bubo may enlarge to a certain extent, and then gradually subside and ultimately disappear, the swelling and other symptoms abate, the parts take on their accustomed function and are restored to their original state.

The mere existence of simple chancre does not necessarily cause bubo, in the female bubo is rare; whenever chancres occur around the foramen or inferior part of the gland or prepuce, buboes are very apt to occur. When bubo does occur in the female, the chancre will be found most probably at or around the meatus. This fact of the situation of the chancre and occurrence of bubo may be reasonably

explained by the connexion which
exists between the part primarily
affected and the Gland, by means of
a lymphatic vessel, which carries
the virus directly to it.
Artificial chancres on the thigh of
male or female are not followed
by bubo.
The diagnosis of Syphilitic from
the other forms of buboes should
not be based on the antecedent
history of the case, although the Pa-
-tient may admit having had sexual
intercourse with a Prostitute,
and a bubo follows, it is not necessa-
-rily Syphilitic, for impure connex-
-ion may produce inflamation of
the Gland or prepuce, causing Gonorhœa
Bapentialis, Lyconiations, or Gonorhœa,
and will subsequently produce
Venereal Non-Syphilitic buboes:

It is on a consideration of the circum-stances relative to each case that the diagnosis must be founded.

Modern Authors have subdivided Syphilis into three separate stages, including in the first stage primary symptoms, or the immediate effects of the specific cause, occuring on the spot where the special virus or vir-ulent matter has been deposited; having described this, the first stage, I proceed to describe briefly the second stage; The second embraces secondary symptoms which follow as a consequence of absorption of the virus, various morbid phenom-ena appear on the skin, mucous membranes, or in the eye, and testicle, the consequence of the absor-ption of Syphilitic virus into the

circulation: Giving rise to a constitutional affection which is hereditary, or in other words, capable of transmission from the mother to the child, but are not capable of transmission by inoculation.
It is impossible to limit exactly the period of secondary symptoms, they usually show themselves about six weeks or two months after the appearance of the primary sore.
The various syphilitic eruptions that occur on the surface of the body may pervade the abdomen lower extremities, arms, face and back, covering the ~~whole~~ whole surface at once, or successively: under proper treatment they rapidly get well, but when left to themselves produce serious consequences.
The mucous membranes

likewise, as before stated may be the seat of secondary symptoms. viz- inside of the cheeks, the lips, tongue, fauces and throat, also the margin of the Anus and inside of the Intestine By the use of the Speculum the Vulva, Vagina, and neck of the Uterus are found to be the seat of lesions attributed to Constitutional Syphilis.

Bubo in no way betokens the probable occurrence of secondary Syphilis, often Persons are afflicted with the largest, most acute, or chronic buboes without ever after being subject to secondary symptoms, on the other hand secondary Syphilis may come on persons who certainly have never had Buboes; Admitting that the secondary disease often comes on during the existence or after the cure of bubo, in such cases we cannot attribute them to the Bubo.

The third and last stage comprehends Tertiary Symptoms, or those Constitutional Syphilitic affections usually included under the name of nodes, inflamation of the periosteum, Exostosis, Caries, and tubercles of the Subcutaneous and Submucous cellular tissue, which are not capable of being transmitted by inoculation, and are not hereditary.

The Tertiary form appears frequently during the existence of the Secondary in the same way that the Secondary may come on during that of the primary; Again, The Secondary Symptoms have successively disappeared and returned, and lastly assume the Tertiary form.

It is not my intention to enter minutely into the Consideration of the treatment of Syphilis as given by different writers, those of acknowledge Authority agree that Mercurial remedies are necessary in the management of Syphilitic affections, that many of the baneful Consequences which have occured from its Administration have proceeded rather from its abuse than its use: No method however long continued will absolutely guaranty the Patient from Secondary Symptoms, But Mercury in the Majority of cases will protect the constitution from Secondary Symptoms - The Mild use of it has also this decided advantage, that if Secondary Symptoms follow they will be of a Mild form. When Mercury gives rise to unfavorable Symptoms it should not be persevered in, its disagreeing with the Patient depends upon inattention on the part

of the Patient to diet or to some other cause.
Although this is unquestionably the most important remedy, there are other articles highly worthy of attention as means for removing diseases of this kind. The Iodide of Potassium has been given with beneficial effects in all the stages of Syphilis, daily experience promises to establish this as one of the most efficacious in the Pharmacopeia. Iodide of Potassium is superior to Mercury in the treatment of Tertiary Symptoms, Mercury in its various forms is as prejudicial at this stage as it was beneficial in Secondary Symptoms. Should the Patient be plethoric Blood may be taken from the Arm. If his digestive organs are impaired, let them be attended to, And then let his diet be regulated according to his constitution And previous habits.

Daily Observation and the History of the Past, proves that neither religion, nor the laws, nor a knowledge of the Consequences will deter Men from exposing themselves to this loathsome disease; Refer back to the time When the World became the Scene of that Condition of Society, which existed in the Sixteenth Century When France proposed means of checking Venereal diseases, by confining those that were diseased in Prison, together With Severe Punishments; Notwithstanding the Punishment, the Disease increased, owing to the Concealments of the Primary Symptoms, and the impossibility of Secluding So many Patients, that it Was ultimately given up, And the Law became a dead letter.

Syphilis at the present day is Widely diffused, although it is no longer presents the dreadful appearance that it did

in the last centuries, Still it exists, and will continue until the world is freed from those unhappy Women, Prostituted, Who form in fact the Sewers of Chancre: Let Means be taken to subject this class to some sort of control, Let there be Institution of Hospitals and Dispensaries for the Gratuitous treatment of these Complaints; Let them Continue not only for One Year but for Twenty, &c. until there is a universal extinction, Let our Motto be "Perseverentia vincit Omnia".

Were such to be the case Europe and America would then have cause to rejoice: He who would thus contribute to prevent or relieve the Sufferings of his Fellow Men, renders to the Cause of humanity a service too high to be estimated by any pecuniary Standard, And one which cannot fail to receive the plaudits of his own Conscience to his latest hour, and the lasting approbation of the Wise and the Good.

An
Inaugural Dissertation
on the
Effects of Cold
Submitted for examination
to the
Provost Regents and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor in Medicine

by
D. Maxwell Parke
of York County
Pa

Baltimore March 4th 1850

In compliance with a very judicious law of this institution. (viz) That all those applying for a degree in Medicine must deposit with the Faculty a dissertation on some Subject connected with the Science of Medicine, I herewith very respectfully Submit to Your examination, a few remarks on the various effects of Cold as a Morbific, also as a Therapeutical agent.

In my remarks I will endeavour to use the term in its popular acceptation, that is, as if it were Something positive and not merely signifying the privation of heat.

An inquiry into, and an intimate acquaintance with, the effects of cold on the animal economy I conceive to be of vast importance to every medical man; for Physicians are not unfrequently called upon in cases of death or injury from cold either to explain the probable mode of its operation in extinguishing life, or to remedy the morbid condition it has produced.

In cold, we have one of the most prolific Sources of disease as well as a valuable remedy for disease already existing.

Death from cold I think may be explained by its action on the external vessels, thereby causing the more deeply seated vessels to be loaded with blood and producing congestion of many internal organs. the more important of which being in these cases the brain, we have death by coma. I think all cases of death from this cause are preceded by a state resembling intoxication, overpowering drowsiness and coma. This is said to be more especially the case when the application of the cold is accompanied by fatigue.

When cold of less intensity or of the same intensity as that which has produced death, is applied to the surface, the superficial arteries become unable to transmit the blood in its usual quantity through the integuments. We see the skin become pale and contracted around the hair bulbs and sebaceous glands exhibiting a roughness that has received the name of Cutis Anserina or Gooseflesh.

By this same contraction of the smaller vessels and repressed circulation, the extreme parts

of the body are diminished in Size. Thus rings which are light on the fingers while warm, may drop off when they are thus affected, and should the application of the cold be continued we find the parts to become less and less Sensitive until their Vitality is entirely destroyed. Many or most of the internal inflammations acknowledge cold as their exciting cause. Acute Rheumatism has perhaps no other external origin. Apoplexy, Palsy, and Dropsy are its frequent consequences. Dr Bateman has remarked in his observations on the diseases of London, with the exception of a Small number of diseases caused by unwholesome occupation and contagions, the great mass of human maladies in this metropolis is referable to climate or State of the Seasons and to intemperance. Best of these two causes the Vecissitudes of the weather, especially its cold are by far the most prolific Sources of disease. It must therefore be to every one, who is likely to be engaged in the practice of Physic, a matter

of first rate importance and of great interest, to be familiar with the circumstances under which the application of cold is the most prejudicial, or exerts the greatest influence of any kind upon the human body. For to ascertain the cause of any disease is a large step towards the ultimate removal of that disease as far as human endeavours are competent to its removal. Of the circumstances which favour the morbid effects of cold, some relate to the condition of the body itself, others to the particular manner in which the cold is applied. It was I believe long a popular as well as a professional axiom, that sudden vicissitudes of temperature were dangerous; that a previous hot stage of the body augmented the hurtful effect of cold whether applied externally or internally. But this is not now universally held as correct. We have it from indisputable authority, that the Russians are in the habit, while reeking from their vapour baths, of rolling immediately in

the Snows or plunging into cold water without Suffering from the Suaden change. It is plain therefore that the proposition which assigns danger to Sudden vicissitudes of temperature, must admit of Some limitation. The effects of a Sudden descent from one point to another in the Scale of atmospheric temperature, must vary according to the State of the body at the time. If the external temperature be lower than that of the body, the calorie thereby carried off is speedily replaced in a healthy person, by the evolution of heat from within, aided by clothing or exercise. The terms. Hot, Warm, Cool, & Cold, as applied to Surrounding objects, are regulated by the Sensations they produce upon the average of persons. If the heat be carried off as fast as it is evolved and no faster, no particular Sensation is felt. Consequently the bodily powers are neither Stimulated nor exhausted. This equilibrium is maintained when the thermometer Stands at 62° Fahrenh. or thereabouts. That is the point in the Scale commonly called temperate.

All above that Point to 70° are called warm; all above 70° are called hot; all from 60° descending in the Scale to 50° are called cool; all below 50° cold. This is considered the average of healthy men; but remarkable diversities occur among individuals in respect to the epithets which they assign under the guidance of their Sensations to the particular degrees of temperature, their Sensations differing according to the Power which their constitutions respectively poses, of evolving heat. If this inherent power of evolving heat be entire and active, no peril, in my opinion, need attend even violent alterations of external temperature. But on the contrary unusual heat of body at the time cold is applied instead of implying danger is in reality a condition of Safety, Provided the heat is steady and permanent. We have many instances on record of the cold affusion being employed in the hot Stage of fever and even in Scarlet fever, not only with impunity but with great benefit to the patient. And the same holds

true in the application of cold if the body has been heated by exercise or indeed whatever means may have been the cause of the increased temperature provided always the cause remains steady in action, that there is no local disease, and that the body is not fatigued. But if a person be already exhausted and weakened by exercise, if he be sweating and thus rapidly parting with his heat, or if he be sweating and at rest immediately after and during the application of the cold, then it becomes highly pernicious and likely to produce internal mischief. The more correct statement then respecting the application of cold to the human body would be, that it is dangerous not while the body is hot but when it is cooling after having been heated. The same is also true whether the cold be applied externally or to the mucous membrane of the Stomach. For we see very many deaths take place immediately after a copious draught of cold water has been taken into the Stomach. The fatal

effects of cold water thus applied was experienced on a large scale among the troops of Alexander upon their reaching the banks of the river Opus; thirsty, perspiring & fatigued from their toilsome marches An ancient writer says Alexander lost more men on that occasion than in any one of his battles. If death does not speedily ensue, the external or internal application of cold under the circumstances described above inflammation of some internal part or parts is very apt to arise. Thus it is obvious, that among the circumstances which favour the morbid effects of cold and relate to the body itself, must be included whatever has the effect of weakening the System and so diminishing its capacity of evolving heat; among which are fasting, evacuations, fatigue, much study, rest soon after great exercise, and preceding disease. And consistent with this same principle, is the assertion that the faculty of evolving heat is very feble in quite old and in newly born persons, it being in these classes we have

the greatest number of victims to the effects of cold. The injurious effects of cold upon the System depend, in a measure, upon the intensity of the Sensation it produces, but far more on the duration of that Sensation.

We are not likely to be injured by a temporary exposure to cold, however intense it may have been; but even a slight Sense of chilliness, if long continued, is apt to terminate in some form of disease. Cold is also more likely, other things being equal, to prove injurious when it is applied by wind or currents of air, and its injurious operation is augmented if accompanied by moisture. But in all cases the morbid effects of cold on the System are modified by the degree of attention that is paid to the Sensation it excites. This is evident from the impunity with which maniacs undergo exposure to cold even when suffering no fever by which the lost heat might be regenerated. Again it is open to the most common observation that Catarrhs, Coughs, and all pectoral complaints are

most apt to commence or grow worse in the colder months. When the body is exposed to cold of sufficient intensity for a time, it speedily occasions partial death, that is death of the extremities, as fingers, toes, feet &c. When the extremities are thus exposed to the action of cold the first visible effects are, they become of a dark lea colour which depends on a diminution of the blood conveyed by the arteries, and a stagnation of it in the veins. If the part continues to be exposed to the cold, the stagnated venous blood will be gradually expelled by a contraction of the tissues, leaving the part of a livid paleness, perfectly insensible and motionless, and much reduced in bulk; in which condition it is said to be frostbitten. A part thus affected may be destroyed in two ways, either by direct Sphacelus or mortification if no reaction whatever can be induced, or by gangrenous inflammation if the reaction when induced be rendered too violent. The degree of cold necessary to produce this morbid result, under ordinary circumstances must be

considerably below freezing point. It has been said to be about 10° below the Zero of Farenheit, but a great deal must necessarily depend upon the habit and condition of the person exposed. For a native of a warm climate would be severely injured by cold that would be innocuous to an inhabitant of a colder region; and persons who are in the habit of using a great deal of ardent Spirits being ~~who are~~ commonly more or less exhausted by constant Stimulation, are more liable, by far, to suffer from intense cold than are those who make use of no artificial Stimulant.

As a Therapeutical agent we often see cold applied, and in most cases with surprisingly beneficial results. In a case of Tetanus Algidus referred to by Prof. Dunglison, he says that after the use of narcotics, which were diligently applied without the disease yielding, the patient was taken from his bed to a brook that run near by, and a pailful after pailful of cold water was thrown over him whenever the Spasm became violent; under

which treatment the spasms soon yielded, and by a continuance of it they ultimately passed away and the patient ultimately recovered. The beneficial agency was probably exerted in this case, by making a new impression on the nervous system through the shock that accompanied the cold affusion, and thus broke in on the chain of morbid phenomena seated in the cerebro spinal system.

As an astringent cold has often been applied, and with the most desirable results, as in active hemorrhage where a condition closely allied to inflammation exists. by antiphlogistic means the flow of blood is arrested which thus becomes an astringent, thus in hemorrhage of the active kind, cold becomes an indirect astringent and one that may be considered second to few of the agents under that class. When however the cold may be made to come in contact with the bleeding part in form of Ice or Ice cold water, its action is that of a direct astringent, producing condensation and corrugation of the tissues

diminishing the caliber of the vessels and coagulating the exuding fluid. Thus in cases of metrorragia, Ice cold water being brought in contact with the affected vessels has been found a valuable agent. Again we see a patient asphyxied by an excessive inhalation of carbonic acid, the beating of his pulse is no longer felt, the respiratory movements are not seen, Yet his temperature is elevated. If we remove this patient from the deleterious atmosphere, strip off his clothes that the air may have a more extended action on his skin, expose him to the cold even if it be winter, and throw cold water on his face, we may soon see the respiratory movements reappear. While if instead of cold, continued heat were to be applied, it would be one of the most effectual means of extinguishing life. In sudden faintings when the pulse is weak and imperceptible the action of the respiratory organs diminished and sensation and voluntary motion suspended, the most

ignorant are aware that proper means to be resorted to are exposure to cold air and sprinkling with cold water. Likewise in violent attacks of asthma when the respiration is so reduced that the Patient experiences suffocation, he will count the cold in the most severe weather, breathe frosty air and almost immediately finds himself relieved. Cold in febrile affections is a valuable agent and in such affections, if properly applied, may almost be regarded as among the *febrifuga magna*. One of the great characteristics of fever is increase of heat above the natural temperature of the body. To reduce this excessive heat, external and internal agents of a suitable temperature are most effectual. Damp or moist cold of all external means of refrigeration tends most to diminish the activity with which heat is developed. Hence its superior value in fevers, a point I believe that is now universally acknowledged. But if damp cold cannot be sufficiently prolonged, sponging with water of any

temperature below that of the body occasions abundant evaporation and a salutary refrigeration, the effect of which is extended to every part of the frame. Cool air is also a valuable refrigerant and its admission in febrile affections is generally grateful and salutary. There was a time (and that not 50 years since) when every thing that could be termed cool was altogether excluded from a patient in a febrile affection. When the temperature of his chamber was kept elevated, and hot fluids were administered with the view of concocting or maturing some noxious peccant humour and aiding its expulsion from the body. But these notions have passed, or are fast passing away and fortunately for the patient the instinctive desire for cold drinks is now no longer oppressed. In fact I believe the use of cold fluids internally and the free admission of cool air into the apartment when the weather and feelings of the patient will admit of it are looked upon by the profession as amongst the most important elements

in the management of febrile cases.
When the Ventilation of an apartment is properly attended to, the quantity of febrile heat is diminished both by the contact of fresh portions of cool air, and by the increased evaporation that necessarily ensues. When cold fluids are taken into the stomach their effect there is analogous to what occurs when they are brought in contact with a portion of the cutaneous Surface. Of the fluids thus administered Ice cold water, Iced Lemonade have preference. It is a fact long noticed by every one, that a copious perspiration breaks out over the Surface of the body during the heats of Summer after a glass of cold water has been taken. This must be owing to the refrigerant influence of the low temperature reducing the erethism which exists in the mucous membrane of the Stomach, as it does in every part of the dermoid Surface wherever the temperature is extremely elevated. By depressing the erethism to the healthy

standard, the healthy influence is propagated at once to every part of the capillary surface, and the cutaneous transudation is increased by the decrease of the exalted action of the cutaneous exhalents. It is not reasonable to suppose the fluid drank can pass so rapidly into the vessels as to account for it; for the perspiration breaks out almost instantaneously after the fluid has reached the stomach and impressed the lining membrane. Bathing is an external mode of applying cold in febrile affections. The temperature of the bath is a point to be duly considered. In such cases, as I have already remarked, 62° Ft. is generally called temperate. The practitioner should never lose sight of the great difference between the effects of a bath some degrees below what is called temperate and one a few degrees above that point. While the one has a marked febrifuge or refrigerant effect, the other is powerfully excitant. Consequently the two are adapted for very

of opposite affections. a decided difference also exists between immersion and affusion, immersion being attended with a shock or powerful impression on the nervous system. when therefore our object is to diminish febrile heat, attention or sponging a part of the capillary surface as of the upper or lower extremities is preferred to general baths, affusions, ~~and~~ shower baths or any form of douche. But if our object is to break in upon any morbid chain, as to cut short a fever, then we make choice of that form of application which produces the greatest shock produced by it. It is not suitable for those of great nervous susceptibility. In persons who are predisposed to certain head affections the shock and refrigeration of the cold shower bath applied immediately to the head whilst derivations are applied to the lower extremities often proves most salutary. After the cold stage of remittent fevers, when the nervous and vascular systems have been excited to a

proper play of their functions, and reaction has taken place, cold drinks become grateful and appropriate. They reduce the excited actions and hasten the arrival of the Sweating Stage. The same may be said of Cool air, and the regulations of the patients clothing in similar cases. Allusion has already been made to the prejudice that once was almost universally prevalent against the use of cold drinks in fevers. The same prejudice existed in eruptive diseases, as in Small Pox and Scarlatina. At one time it was supposed the free admission of cool air injuriously checked the eruption, but in many cases (if not generally) the efforts of the intelligent Physician are confined to the admission of Cool air, Sponging the body with cold and sometimes tepid water, especially during the eruptive Stage, and the use of cold internally at the same time keeping the alimentary canal clear. Whenever it is necessary to diminish the amount of

fluid in the capeillary vessels of a part. the employment of cold is indicated. hence in topical inflammations, Strangulated hernia. &c they are greatly employed. In diseases of the respiratory organs which interfere with the due aeriation of the blood in the lungs, the exposure of the body to cool air, under certain precautions, is a useful agent, and its propriety is indicated by the instinctive desire which is felt for the free admission of air under such circumstances. The cases in which cold may be applied Therapeutically with advantage, are very numerous. The practitioner who reflects, will easily understand the majority of those in which it is applicable. Some however may be too intricate for such a Tyro in the Science as your humble Servant, but in such cases we fortunately are generally guided by the sensations of our patients. Where the abstraction of heat is attended with disagreeable sensations to the patient it can rarely -

if ever be proper: even in fevers where the employment of cold is most clearly indicated we are or should be greatly guided by the feelings of our patient and if the free admission of cool air. Cold ablution and cold drinks excite chillings or any uncomfortable feelings their application is regulated accordingly. Some years since one by the name of Priessnitz at Graefenberg in the mountains of Silesia proposed to cure all diseases that are curable without any medicine except cold water employed externally as well as internally, together with close attention to regimen, mountain air, regular exercises, entire abstinence from all fermented or distilled liquors, and the plainest and coarsest food, and although the way in which he is followed indicates the height of credulity in his patients. there is, I think, no doubt that the entire change produced in their mode of life and the new impression made by his

novel mode of employing the fever element, are highly beneficial. In the same manner as a trip to the mountain Springs of this or any other country, when proper attention is paid to the employment of the waters internally and externally, and to regimen, without tasking much into consideration the feeble medicinal action which some of them are capable of exerting, is annually observed to restore many Valetudinarians who have employed the various agents of the Materia Medica for years in vain

And now although I feel that the foregoing hastily collected, and ill connected ideas comprehend but a very small part of what might be said on this Subject, Yet my inability to say much more at this time induces me to close with what I have already said. At the same time hoping You will deem it Sufficient for the Purpose for which it is intended. In conclusion, I would here beg leave to return to the Medical Faculty of the University of Maryland my sincere

and heartfelt gratitude for their unceasing kindness since our earliest acquaintance, and for the untiring Zeal ever manifested by each and all of them in aiding myself and my fellow Students in the acquisition of a knowledge of our most noble Science. And that the blessing of Almighty God may ever rest on us all and our beloved Institution is the prayer of

Yours Truly
J. Max. M. Parke

Balto Mar 4th 1850

An

Inaugural dissertation

on

Cholera

Submitted to the examination

of the

Provost, Regents and Faculty of Physic

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for the degree of

Doctor of Medicine

by

C. E. Rider.

Somerset Co.

Maryland

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The Cholera.

The precise time, when this frightful malady first made its appearance among mankind is a matter of dispute, among the members of the medical profession; some placing its first visitation in the year 1830. and others contend, that it has existed, in an epidemic form ever since the year 1817. The latter is the most gendally received opinion; and as Cholera is my subject, it will not be out of place to give its history. It was first known in Bengal, starting from that province, we find it sweeping over Asia with long and rapid strides. In 1820 it had reached Canton and was heard

of in Tartary. For a while it seemed to 14
pause, as if loath to quit the place of
its nativity, and the regions where
it was wont to revel in its infancy
In 1830, it reached Europe, and 1832
found it in the streets of Paris and
London. On the 8th of June of the same
year it reached America, and rapidly
spread its way to the Mississippi and
the shores of the lakes. Where ever it
appeared in 1831, it spread universal
dismay and terror. It was beheld, as
an awful thunder-cloud afar off, or
as an conquering army, flushed with
victory, and rushing on eager for the
spoil, trampling on the prostrate
forms of thousands, and having for
its music the harsh and discordant
groans and writhings of its helpless
victims. The opposing forces of the
medical profession were compelled

to yield to its bold attacks; and all that
Science could do, or experience effect
was of no avail. They could not erect
a barrier strong enough to impede
its rapid progress for a single
moment. The dismayed and frightened
population of one country fled from
their homes and friends, only to be
overtaken in a foreign land, and have
their eyes closed by strangers hands.
Thousands were deprived of burial, and
lay in putrid heaps in every street,
lane, and by-path. It was as swift
as the lightning's flash, and as
fatal as the cannon ball.
After it had passed over Europe
and America, the vanquished
army of Medical Science collected
its scattered forces, and began
to search with diligence for
something to stay its triumphant

invasions; hoping, at the same time, it would never turn its steps towards their territories again. All the books, written from the days of the venerable Hippocrates up to the 19th. century were industriously rummaged. Nostrums, specifics, &c were multiplied in great numbers; and their peculiar powers were made known by the discoverers, in large hand-bills, displayed in every section of the country. How vain were their pretentions! They beheld their barriers, one after another, go down before this mighty disease. All they could do, was to wish it a happy journy, and a long lasting, and eternal farewell. In its second visit, they met it with more boldness; and if they

were not able to repel, they were determined to give it a warm reception. Camphor, brandy, opium, quinia, cayenne pepper, and stimulants of every kind, were collected; to make its bed as hot as possible. And it is a sad fact that a too free use of these articles killed nearly as many patients as cholera itself. As soon as a person complained of any uneasiness in his bowels, he was drugged to death with opium and acetate of lead; a grain or two of morphia being often added, "to make security doubly sure." Under such a plan of treatment, it is not at all astonishing that a large majority of those attacked with the disease died. This plan of treatment was followed up to the letter in the

South and West.

The symptoms that characterized this disease, when it made its first appearance in an epidemic form, were of two kinds; as we are informed by Dr Watson, ex professor of King's college. In the one most fatal, the patient was seized suddenly and without warning. This was comparatively rare. Most commonly the specific symptoms were preceded some little time by diarrhoea: constituting what he is pleased to designate, as the second division of symptoms. Dr Eberle informs us, that the disease attacked its patient, and hurried him off in a few hours. The sufferer was generally seized with diarrhoea, followed by great prostration of

strength, unquenchable thirst, cold and clammy sweats, scarcely perceptable pulse, cramps in every part of the body, particularly in the abdomen and inferior extremities, inexpressible anguish and anxiety of feeling, extreme restlessness, excruciating tormina, constant retching and vomiting, and very frequent watery stools, resembling rice water or thin starch, containing small, white albuminous flakes; there were sometimes varieties in the evacuations, but most commonly they were of the kind I have been speaking of above. This circumstance was universal, that the evacuations contained no bile. With all these symptoms enumerated, there was early sinking and collapse.

The whole human machine was disordered in its opperations; the exhalents and absorbents ceased to act. the liver refused to perform its healthy functions. the kidneys took on unhealthy actions, and in fine every thing was out of harmony. The surface grew cold and unpleasant to the touch. The eyes were sunken in their sockets, the cheeks fallen, and the patient looked like a corpse. The sufferer, in a few hours after the attack, resembled a person who had laboured under some protracted and emaciating disease. The finger nailes became blue, and the hands cold and shrinked. The voice became coarse and husky; delerium seldom occurred, and in a great number of cases, the

intellect was not at all impaired
the patient not being conscious of
his approaching dissolution. But
how different is it in its second
visitation! It comes as a giant
almost deprived of its strength.
The attack is not so sudden. the
diarrhoea is of longer continuance
and is not so distressing, the
vomiting is less severe, and
the cramps not so excruciating.
From the diarrhoea continuing
so long, we are given time to
check it by appropriate remedies,
also enables us to prevent the
vomiting and cramps.

The Pathology of this disease
is wrapt in obscurity; the changes
exhibited by post mortem examin
ations give but little information.
The best pathologists have failed

to throw any light upon the subject. One thing we are well convinced of, the liver is totally inactive, the skin is cold and clammy, the capillarys are congested, the blood is of a thick and dark character, moving sluggishly in the veins and arteries, every function is disturbed or interrupted, and every organ inert. The cause of this morbid change is yet and ever will be a matter of dispute. For the present we have only to follow the dogmas of those who have made the farthest researches into the character and nature of this malady, or mark out a theary of our own. Acting under this authority I will give my own opinion about the most prominent symptoms of this

disease. Every person that ever saw a case of cholera, has noticed the peculiarity of the discharges. And when the evacuations are very large, how soon the patient sinks. It is my conviction, that the lacteals are prominently disordered in their operations, being inclined to pour out the fluids they contain into the bowels, rather than to carry their contents into the general circulation, ~~An~~ to nourish the body. If this were not the case, in what way are we to account for the enormous quantity of the rice-water evacuations. This is more clearly demonstrated in the treatment. In every case, astringents are demanded, and strongly recommended by the best authorities. These by acting on the mouthes of the lacteals shut

them up, as it were. thereby preventing the diarrhoea in a great measure. As soon as the discharges from the bowels are stopped, the patient ceases to grow weak, support is given to the sinking sufferer, and we have more hopes of his recovery. The convalescence is rapid. thereby showing that the malady was not owing to any morbid alteration of any of the vital organs. Common diarrhoea would not produce such prostration in so short a time, and it seems clear to me that this fluid, resembling rice-water, the loss of which produces sinking and collapse so soon, is essential to the nourishment of the body. Although patients have died without there being rice-water discharges from the bowels, yet in every case

it has been detected in the bowels.
The post-mortem examinations made by a physician of New Orleans would go to prove as much. His arguments are ingenious enough. and if we were able to prove all that is asserted by him. the pathology of cholera would be stripped of a great deal of its obscurity. But I am sorry to say, that my belief is not composed of so plastic a material, as to be moulded to suit all of that learned gentleman's notions and opinions.
The Prognosis of this disease was always unfavourable, in its first visitation; but now we have less to fear, and more to hope.
In 1831 and 32. when the regular symptoms, peculiar to this severe form of cholera set in, even under the best management. and most judicious

plan of treatment, the patient died. This mighty malady attacked the patient, and ran its course in a few hours. But now it is much slower in its progress. If we are called to the patient in time, we may check the diarrhoea, and restore the patient to health. The reports of the number of patients cured, is far greater than formerly; which shows, that the disease is not so fatal; or the treatment is better understood now, than it was in 1831 and '32.

It has been a matter of the greatest dispute, whether this disease is contagious, or communicable by a specific virus. Like every other mooted point of dispute, between the members of our "Honourable profession" it has been carried too far.

Nothing has been productive of more evil. Each party maintains its own doctrines and opinions, and is unwilling to grant any favours to others; and amid the feelings of hostile passions, and the contendings of adverse parties to which this disease has given birth, could we be permitted to look on, as a silent spectator, and sum up in one great collection, the arguments, equally good on both sides, we might, after mature deliberation, be enabled to a conclusion, which, if not in accordance with the views of each party; would be reconcilable to the prejudices of both. We cannot regard it as a wholly contagious disease, nor can we reconcile ourselves to the belief that it is entirely dependent on a specific virus, communicable by the air.

Under peculiar circumstances it is highly contagious. Place a man sick with Cholera in a room, but badly ventilated, let persons be with him for days and hours together, and they will be very apt to take the disease. The same may be said of Dysentery. but dysentery is not regarded as a contagious disease. As a general rule, I do not think, from the authors I have examined on the subject, that Cholera is (as a general rule) contagious.

The treatment may be classified under three heads; 1st Diarrhoea; 2d Vomiting; 3d Cramp and Collapse. Some have divided the diarrhoea into two kinds; common diarrhoea, and the rice-water discharges. This subdivision is useless and very often productive of evil. Because if

we were to treat the diarrhoea in the first stage of this disease, as a mere looseness of the bowels, we would do the patient no good. Cholera is like fire. We can extinguish the spark without any trouble, but are not able to controle it, if it is permitted to increase to a blaze. Our measures should be prompt an effective. If we fail in our first attempts to stop the discharges, we should resort to the most powerful means in our possession. In prescribing for the diarrhoea, we should endeavour to stop the actions of the bowels, and rouse up the dormant secreting organs. Nothing answers better for this than Calomel and Opium, given in as large doses, as the nature of the case may demand. The addition of a few grains of acetate of lead, and some

camphor & cayenne pepper would
not be amiss. Yet we should not
be led so far in our endeavours to
check the diarrhoea, as to produce
constipation; for this would be
"pouring oil on the fire, to extinguish
the flames!" If we are unfortunate
enough to cause constipation, we
should relieve it, by giving small
doses of flowers of sulphur, combined
with charcoal. Some place great
reliance on the above apperient in
Cholera. If the doses of colomel and
opium should be rejected by the
stomach, we should give acetate
of lead in solution, combined with
acetate of Morphia; at the same
time, apply cataplasms over the
Epigastric region. The cataplasms
may answer a double purpose, viz.
soothing the stomach and preventing

the cramps. Should the patient be distressed by vomiting, we should use every means to stop it. Knowing if it continues, the poor sufferer will, in a short time be groaning under excruciating cramps in the abdomen and inferior extremities. To relieve these cramps, antispadmodics should be prescribed; of this class of medicines, nothing answers better, in this case, than Camphor, given in solution with brandy. Some recommend an enema of the infusion of tobacco; but from its great tendency to weaken the patient, I think it would leave him in a worse condition than before: for if we succeed in allaying the spasms, our patient is left in a state, bordering on collapse. The warm bath has also proved beneficial

in the hands of some. as well as the hot-air bath. If all means fail, from of no avail, the patient is prostrated, constituting the last stage of the disease; Collapse. In it, we have but little hope of our patients recovery. But it becomes us to do all in our power, to avert the blow. For this purpose, we should apply sinapisms to the trunk and extremities, hot bags of sand, bottles of hot water, lavements of warm brandy, and give freely all the most powerful stimulants. Dr Watson mentions injections of warm water into the veins; as beneficial in some few cases; but was always attended with danger, on account of the air getting into the veins. I must certainly credit the report, coming from such high

authority as Dr Watson, yet I should never be tempted to try it, except as a "dernier resort". I have had an opportunity of seeing one case of this disease; under the care of my preceptor Dr Samuel J. S. Ker. It was contracted by a gentleman, returning from the South, to his residence in this county (Louisa). He had the diarrhoea, or as some call it, the premonitory symptom, for three days, before he sought medical aid. The rice-water discharges, cramps, cadaverous expression of countenance, and in fine, every symptom, characteristic of this disease were present. When he was seen by Dr Ker, he was in collapse. By the use of stimulants, his life was prolonged for a day or two; but in spite of all the most potent remedies, ever recommended

in this disease, combined with the skill and long experience of one our most scientific practioners, the case proved fatal.

An

Inaugural Dissertation

on

Intermittent Fever

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of the

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of the

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for the

Degree of Doctor of Medicine

by

H. J. P. Dickinson

of

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Intermittent Fever

Intermittent fever is so called from a very marked series of phenomena, which take place during its progress. It consists in its simple form of three stages; beginning with a cold stage, followed by heat, and terminating in profuse perspiration. The morbid phenomena then wholly or mainly disappear; to be reproduced after an interval varying in length in different cases. The three stages constitute a paroxysm, and the interval between the cessation of one paroxysm and the commencement of the next is the intermission. The different periods at which they recur constitute the type of the intermittent – when the paroxysms return once in twenty-four hours it is a quotidian; when the interval is forty-eight hours it is a tertian; when seventy-two hours a quartan; each of these has some peculiar characteristic – thus the quotidian intermittent usually begins in the morning – the tertian at noon, and the quartan in the afternoon.

These are the rules, but they are liable to exceptions. It is observed also of the paroxysms, that, when the disease is about to yield, they often occur later each day, until they take their final departure: this is called postponing, and is a sure indication that the disease is becoming milder, but when they occur earlier each day they are said to anticipate, and this is looked upon in warm climates with dread; for it shows a tendency to run into the continued form of fever. There are also other types of this disease spoken of by nearly all authors, such as the quintan, sextan, septan and octan, the last occuring at intervals of a week: these last types are very rare; but there are certain irregularities of the three principal varieties, which occur much oftener; as the double quotidian, double tertian and double quartan. The double quotidian is characterized by two paroxysms occuring on the same day — one in the morning the other in the evening; but it is very rarely

met with; the double tertian is more frequent, and is characterized by the occurrence of a paroxysm every day — those which occur on the first and third days corresponding in their time of invasion, severity, and duration; and those of the second and fourth days corresponding likewise. In the double quartan the paroxysms of the first and fourth days are alike, and those of the second and fifth: the fever on two corresponding days is milder than on the other two days, and genually yields to treatment first. An ague may attack a person at any time; but they are much more common during the fall months than at any other season of the year: all persons residing in a malarious district are liable to be affected with this complaint: it is said by some authors that the middle aged are more liable to be affected than the very young or the aged. The former class are more frequently exposed to the exciting causes of this

disease, which circumstance will probably account for the fact of their being more frequently attacked: and the same reason may be given to account for another fact, namely, that the disease is much more frequent in men than it is in women. The symptoms which characterize the forming stage of this disease do not differ from those which usually precede the development of other forms of fever. Before the cold stage sets in the patient is warned of its approach, by a series of premonitory symptoms — these usually consist in more or less general indisposition, a feeling of great lassitude, frequent yawning, streching, and weariness of the whole body: the hands and feet feel cold and benumbed; the nails have a bluish colour — occasionally there is headache and pain in the back and loins. After the foregoing symptoms have continued for an indefinite time, the paroxysm commences — the patient begins to experience

slight and transient sensations of cold along the back, which extends itself to the thorax and abdomen: the blood deserts the superficial capillaries — the features shrink — the skin becomes pale and rough, and bears a close resemblance to goose flesh, after the feathers have been plucked — hence it has recieved the latin name of cutis anserina; which is owing to the projection of the sebaceous and capillary follicles, while the proper tissue of the skin shrinks. The slight and fluting sensations of cold which were felt in the beginning have now become general, and are sometimes intense: the pulse is small and frequent — the respiration is short, hurried and laborious; and the individual is unable to take in a deep inspiration if desired to do so: there is generally great oppression at the praecordia — and the patient is totally incapable of attending to any business. Along with these symptoms there occur

generally much dejection and confusion of the mind, and in some instances delirium; but this last symptom occurs much oftener in the second or hot stage of the disease; frequent and distressing vomiting often occurs, particularly at its close. The above symptoms continue for an indefinite length of time — in some cases not more than twenty or thirty minutes — in others two or three hours: probably the medium length of the cold stage may be set down at one hour.

Hot Stage. The transition from the cold to the hot stage is not abrupt; rigors for a time alternate with flushes of heat, the first sensations of warmth being rather agreable than otherwise. A sensation of warmth is felt about the face and temples; and by degrees the coldness subsides entirely. The skin which before was rough and shrunken resumes its natural colour and smoothness; the extremities which before looked wasted away

resume their ordinary size; the internal organs which during the cold stage were so thoroughly congested are somewhat relieved of their burden. But reaction does not stop here, it goes on until the entire surface becomes reddened and the skin distended with blood; the surface of the skin is dry, and its temperature raised much above the natural standard. Fordyce observed it as high as one hundred and five – while prof Mackintosh says he has seen the thermometer, the accuracy of which had been well ascertained, rise to one hundred and ten in Great Britain, and in warm climates as high as one hundred and twelve. The mouth is hot and dry; the tongue usually furred, and the patient generally complains of great thirst; though this is not invariably the case. The patient has no inclination to take food – on the contrary, he is apt to be affected with nausea and vomiting.

The respiration is more regular than it was during the rigor, but is generally performed more frequently than in health, the pulse is full, strong, and quick, the urine is scanty, but generally high coloured; in many cases the patient complains of severe pain in the head, and occasionally in other parts of the body, especially the back and loins. Convulsions are by no means uncommon in children, during this stage. Some patients are delirious during the hot stage of every paroxysm; but this last complication is rare in comparison with the vast number of cases which occur, though by no means uncommon, in malarious regions: the duration of this stage is various, in some cases lasting not more than one hour and a half – in others continueing from twelve to fifteen hours, before it begins to abate.

Sweating Stage. Perspiration generally appears first upon the forehead, breast and extremities –

and gradually spreads over the surface. The quantity excreted varies in different cases; sometimes it is slight, but generally it is copious – and in some cases very profuse. Immediately on its accession the patient begins to feel some relief; and during its continuance the febrile symptoms gradually abate; the skin becomes cool, the tongue moist, the excitement of the circulation ceases; and the kidneys resume their function; but the urine which is excreted generally deposites a sediment upon cooling. The headache which is frequently the most distressing symptom of the hot stage, abates; thirst ceases; and the appetite returns – with further continuous improvement until a perfect intermission is established: after which, in many cases the patient is enabled to return to his ordinary occupation.

Apyrexia. After the paroxysm has continued for an indefinite length of time, the apyrexia

commences; and although the patient feels comparatively well during this period it cannot be regarded as a state of health. If he has had three or four paroxysms his aspect is generally such as not to be mistaken; he is pale, languid, feeble — and has a peculiar sallow countenance; he usually has a sense of fullness in the head and at the epigastrium; occasionally pain in the back and loins; the tongue is sometimes perfectly natural in appearance — but it is oftener found to be slightly coated; the appetite varies exceedingly, being in some cases feeble, in others voracious. The longer the interval the more nearly does the patient approach to health; in quotidian more nearly than in tertians, and in tertians more nearly than in quartans. Many writers have been of the opinion that each stage of the paroxysm, subsequent to the chill, depended upon the preceding: in other words, that the cold produced the hot, and the hot

the sweating stage. Although it is easy to understand how the cold stage would tend to make reaction more violent — and how the hot might conduce to bring on the sweating stage in many cases; nevertheless, the theory would entirely fail to account for those irregular forms of the disease in which the different stages of the paroxysm bear no direct proportion to each other; as in cases in which the chill is so slight as to be scarcely perceptible to the feelings of the patient, but the pyrexia which follows is of the severest grade; or in those cases of which the cold stage is very protracted and the hot stage imperfectly developed — the system remaining oppressed, the surface cool, the countenance pale, — and the patient complaining of a sense of heat internally. Prof Wood says the probability is, that while the depression attendant upon the cold stage is naturally followed by some degree of febrile

reaction, as a necessary consequence, the morbific cause, whatever it may be, is capable of producing the hot stage by a direct influence.

Duration With regard to the duration, we would state that it varies exceedingly in different cases; if the patient can leave the malarious locality, and avoid every thing likely to favour a continuance of the disease, in many cases, it would seem to have a natural tendency to get well in from four to six weeks; but if he remain in the locality, where the disease was contracted, and continues to be exposed to the same influence, it will sometimes run on indefinitely for one or two years, until the patient is completely broken down in health, and falls a victim to the sequela of intermittent fever. In those cases which have a tendency to terminate naturally, the paroxysms generally make their appearance later and later at each recurrence; and diminish in severity as the malady advances, until it terminates spontaneously in health

Cause. The only cause of intermittent fever, such as I have been describing, is malaria. Although Hypocrates, and Celsus, and many other of the old writers, referred to marshes as the cause of fevers; it remained for Lancisi, an italian physician, to put forth the first distinct ideas concerning malaria, during the sixteenth century. Many theories have been broached upon the subject — but as it is something that has never been appreciated by any of our senses, they are necessarily uncertain; and as yet, chemistry and the microscope have failed to detect any change in the atmosphere to account for the deleterious effect, which follow an exposure to the specific poison. To the production of this deleterious agent a certain amount of heat and moisture seems to be absolutely necessary. It is said not to exist within the arctic circle, nor does it manifest itself during the winter season in our own climate. It is more noxious at night than in the daytime; and seems to find a more ready entrance into the system, when debilitated

by previous disease, or worn down by hunger and fatigue. It collects about the foliage of trees, making it dangerous to sleep beneath them at night; nor does it ascend high into the atmosphere; but seems to be carried along by currents of air, and is attracted by moisture; consequently it can't cross broad streams of water. The period of incubation varies more in this than in most other specific poisons; and seems to bear some relation to the amount and intensity of the dose — acting in some cases almost immediately after an exposure — in others lying dormant for several weeks or even months.

Anatomical characters. — There is no one lesion by which to distinguish intermittent from the various other forms of fever, revealed by dissection. Nevertheless, if the disease has been protracted, we generally find alterations in the structure and consistence of various organs; the most frequent of which is probably that of the spleen, which may often be felt

extending far down into the abdomen, during life, and is known by the name of the ague cake: its consistence is very much changed — generally softened, and in some cases broken down so as to resemble coagulated blood, enveloped in a membranous covering. The liver also presents marks of derangement — in some cases it is enlarged and softened — in others it is indurated, and may be either larger or smaller than natural. The whole tract of the gastro intestinal mucus membrane occasionally presents traces of chronic inflammation: it is thickened, softened in structure, and easily peeled up from the subjacent cellular tissue. The brain is generally healthy in appearance, but, in some cases it presents traces of inflammation or congestion with effusion of serum into the ventricles.

Diagnosis.— The diagnosis of this disease can never offer much difficulty, after the first paroxysm. The periodicity of the disease, and its occurrence

in a district where ague is rife, are generally sufficient to make out our diagnosis, even in the masked varieties, which occur so frequently in malarious regions. During the first paroxysm, we cant always tell whether our patient is going to have intermittent, remittent, or some other form of fever.

Prognosis.— The prognosis is generally favourable; patient seldom die of simple intermittents; it is only when they attack persons labouring under some organic disease, and broken down in health, or when they anticipate the period of attack, each day, that the prognosis becomes at all grave; and, even then we can generally promise a cure of the malarious disease; although it may be beyond the reach of human skill to arrest the progress of the organic lesion.

Treatment.— During the paroxysm, the indication is to assist nature, counteract morbid action, and mitigate the suffering of the patient.

On the cold stage, warm diluent drinks should be given freely — warmth applied to the surface by means of hot bricks, bottles filled with hot water placed at the feet, and around the body — sinapisms to the epigastrium; and, if he suffers much from internal congestions, recourse may be had to the warm bath, or the hot air bath, which is more easily applied; or as a substitute ligatures may be applied to the extremities, which by preventing a return of blood from those parts through the veins will tend greatly to relieve internal congestions, and probably shorten the duration of the cold stage without debilitating the patient. Opium given at the commencement of the chill is an admirable remedy — it diminishes the severity of the rigor, quiets pain, and relieves the irritability of mind, which is frequently a distressing symptom during this stage.

During the hot stage cool air should be freely admitted into the patients apartment, —

he should be allowed refrigerant drinks, such as iced water, iced lemonade, or the effervescing draught, in such quantities as not to oppress the stomach; they being both grateful and beneficial— diminishing morbid heat, promoting perspiration, and favouring a solution of the paroxysm: if the surface be hot and dry recourse may be had to sponging with cool or tepid water; when the pulse is full, strong, and hard; with severe headache, or pain in any other part, leading to the suspicion of inflammation, the indication is to bleed; — if the patient be strong and plethoric, the lancet should be employed; if, on the contrary, he be weak and aenemic, and the evidences of inflammation are unequivocal, blood may often be taken advantageously, by means of cups and leaches from the neighbourhood of the part effected. Opium has been highly recommended in this as well as in the cold stage; it is our best remedy for

relieving the nervous symptoms, which are produced by the depression of the poison on the great nervous centres; it is also useful by controlling the force of the circulation, and relieving nausea: if however, there is a tendency to sanguineous determination to the brain, or if inflammation is already existing in that organ, or its membranes, the use of opium is contraindicated.

If the perspiration is scanty it may be promoted, by keeping the patient in bed, covered with moderately warm clothing, and giving small quantities of warm drink: on the other hands, if it is profuse, it may be stopped by taking the patient out of bed, drying the surface with towels, and changing his cloths. Such are some of the indirect means that are occasionally employed in the treatment of this malady: but in many of the ordinary cases of intermittent, such as I have been describing, it is not

necessary to enforce remediate treatment until the intermissions or apyrexia; for it is in this stage, that the cure of the disease is to be effected. If the patients stomach is loaded with undigested food, or oppressed with acrid and accumulated secretions, they should be expelled by the use of an emetics cathartic; if, on the contrary, he has bilious indigestion, with excessive vomiting of bilious matter, recourse must be had to the use of hydrocyanic acid, opiums, or sinapisms to the epigastriums, to quiet the nausea and vomiting; after which, a good mercurial purge, followed by castor oil, to open the bowels, unload the portal system, and restore the functions of the liver. In mild cases without gastric or hepatic disorder, it will be sufficient to evacuate the bowels thoroughly by sulphate of magnesia, or any other mild purgative. Bleeding is seldom required; but if the symptoms are such as to indicate it, blood may be taken either locally or generally.

As soon as the bowels have been opened we should commence with the specific treatment, which consists essentially in the use of peruvian bark, or some of its preparations; of which the sulphate of quinia is the one most frequently employed, and is decidedly the best remedy that has ever been discovered in the treatment of malarious diseases. Before its discovery was made known by Pelletier and Caventou in eighteen hundred and twenty, the bark in substance was the only form, in which the remedy could be confidently relied upon— and in many cases of irritable stomach, owing to the large amount of woody fibre and nauseous taste, it could not be retained in a sufficient quantity to produce its full effects. Of the modus operandi of quinia, in curing ague, nothing is known. The best mode of giving the sulphate is in small doses, at intervals of one or two hours, during the intermission; if it purges, or if the patient has diarrhea,

it may be combined with opium: in cases accompanied by great insensibility of stomach, and consequent deficiency of absorbent power, capsicums, piperine, or the oil of black pepper, may be advantageously employed in connexion with the sulphate; they seem to increase the specific power of the remedy, by their stimulating and tonic effects. It sometimes happens, that the stomach is too irritable to retain any preparation of quinia, in which case, it may be given per rectum, in doses two or three times as large as would be required by the mouth. The cinchona in substance may be employed in cases not attended with much irritability of stomach, or inflammation of any of the viscera: the indications, for combining with it, opium, or stimulants, are the same as was given in the case of quinia. Of the preparations of bark, the compound infusion of the United States pharmacopoeia, and Huxhams tincture

are the best; and are generally preferable to the bark in substance. Arsenic is another highly efficacious tonic febrifuge; and is best adapted to cases attended with rather a full, robust, and uninitable habit: it has the advantage of being cheap, and tasteless; but the disadvantage of acting as an irritant poison, if swallowed in an overdose. Fowlers solution is the preparation generally employed; during its use its peculiar effects must be carefully watched for; and as soon as they appear, the use of the remedy suspended. Salicine is another substance which has been found effectual for the cure of intermittent fever, it has been tried on a tolerably large scale by some physicians, and the testimony to its influence is very strong. In ordinary cases it is said to be almost as certain to cure as quinia, without producing the disagreeable buzzing in the ears, which follows the use of the former remedy. Various other

remedies have been employed with some
success in the treatment of ague; but as
they are seldom used now a days, and not
very likely to be, as long as quinia, arsenic,
salicine and peruvian bark, can be obtained,
it will be sufficient to mention a few of them
without giving a seperate description of each.
Of these are spiders web, piperine, cornus
florida, leriodendron tulipifera, aristolochia
serpentaria, eupatorium perfoliatum, prunus
virginiana, anthemis nobilis, angustura bark,
prussiate of iron, and the sulphate of zinc.

Whatever remedy may be selected for the cure
of this disease, its use should be continued
for some time after the paroxysms have
been arrested, to prevent a relapse, which is
very likely to take place two or three weeks
afterwards without this precaution; but
if the sulphate of quinia has been used
we may sometimes substitute some other remedy,
not so costly; as some preparation of bark,

or the infusion of eupatorium, which, with proper care on the part of the patient, will generally prevent relapses: but if they should occur, the treatment is the same as has been already recommended.

An Inaugural Dissertation on Yellow Fever, submitted to the examination of the Provost, Regents and Faculty of Physic of the University of Maryland, for the degree of Doctor of Medicine by Hy W. Webster Jr. of Maryland A. D. 1850.

The following sketch is designed (for the most part) to illustrate the characteristics of "yellow fever" as it appeared in the ships of the American naval squadron stationed on the coast of Mexico in the summer of 1847. The authors limited observation and experience at that time have suggested to him the materials of his "inaugural dissertation", which though imperfect both in matter and composition, he trusts will meet with a favorable reception and an indulgent consideration.

This fever rarely makes its appearance in our own country north of the latitude of Charleston S.C. but nevertheless as a disease likely at any time to visit our shores, and which almost annually sweeps off hundreds of the gallant sailors who man our commercial and belligerent marine it receives no inconsiderable

portion of attention from those the responsible province of whom, is to teach the "healing art."

Great diversities of opinion have existed with regard to the nature and treatment of this disease, and many theories have been advanced to explain the method of propagation which it appears to manifest under certain circumstances. Upon these it is not my purpose to comment, since it is the opinion of most modern authors, that no evidence has been adduced and sustained, that "Yellow Fever" is properly a contagious disease, and therefore they have classed it as communicable only by infection.

I would infer from my own observation that this infectious quality is only accidental, ~~and~~ acquired in crowded hospitals and ill ventilated apartments

and lost whenever the causes which gen-
erate it are removed. Great discrepancies
of opinion have also existed among profess-
ional men. respecting the etiology of
"yellow fever". but it is now the general
belief that its cause is a peculiar spe-
cific miasm. probably. generated by
the decomposition of animal and
vegetable matter. The epidemic to which
I have alluded. made its appearance in
July and spread rapidly while the
warm weather continued. but the cold
winds and heavy rains which prevail in
that latitude during the autumnal months
seemed to check its progress. thus prov-
ing that it was under thermometrical
and atmospherical influence.

The disease usually manifests itself
suddenly (generally at night) by rigors.
violent pain across the forehead and
temples. in the "small of the back". in the

the loins and extremeties, and the sensations which commonly precede other fevers.
These are soon succeeded by great vascular excitement. The eyes are red and suffused and intolerant of light. The skin hot, dry and imparting a burning sensation to the hand; pulse large and frequent - tongue moist and white and bowels constipated.
At the end of the first 12 hours there is great exacerbation of the fever. the patient is restless. the heat and dryness of the skin is augmented the pains intense particularly in the frontal sinuses and lumbar region. There is great thirst, and tenderness of the epigastrium upon pressure. The stomach now commences to be irritable and if the fever is not arrested soon the patient is in imminent danger.
All the symptoms I have enumerated are aggravated until the third day (which

ushers in the third stage) when there is an apparent amelioration of some of them.
This however is delusive and but of short duration. Delirium soon comes on. the eyes become turbid. the skin yellow. there is harassing singultus. great soreness along the track of the oesophagus. the matter ejected from the stomach becomes black. looking very much like coffee grounds. the pulse sinks. the tongue becomes brown or black. Hemorrhages take place from the mouth. nose and anus. and death which terminates the scene is preceded by. subsultus tendinum, vibices, floccilatio and violent - or low-muttering delirium.
All the above symptoms are not apparent in every case. in weakly habits there is not so much vascular excitement but the fever is usually more protracted

some individuals retain their senses until within a few minutes of death in others delirium is present from the inception of the disease to its termination. Such however is the general succession of symptoms which characterize "yellow fever."

Severe pain in the back - tenderness of the epigastrium upon pressure - suffusedeyes - delirium - absence of thirst in latter stages - scanty urine - all indicate extreme danger - and when black vomit appears scarce a hope remains.

Garbled urine letting fall a copious sediment - bilious discharges and moist skin are favorable symptoms.

With regard to the anatomical lesions observed (in consequence of my limited pathological skill) I can say very little The only appearances that I recollect with any degree of certainty were -

blood - coagulable. liver - anemic: gall bladder - filled with a gelatinous looking fluid of a black color. Stomach and intestines exhibiting traces of inflammation or spharcelus and containing a black fluid similar to that ejected by vomiting.

The following appearances after death are also enumerated by authors - posterior part of lungs turgid with blood - internal surface of oesophagus inflamed - effusion of serum into lateral ventricles of the brain and turgidity of its vessels.

The black matter found in the stomach is evidently not bile but blood poured into the stomach from its ecconiated and gangrenous surface altered by the gastric fluid.

The treatment which is attended with the most eminent success and which was the same pursued by our naval practi-

-ioners. I shall now proceed to describe.
During the first 12 hours, a full and
copious bleeding and a mercurial
purgative followed by Sulph. Magnesia.
Cloths wetted in cold water and kept
constantly applied to the head, these soothe
pain, diminish heat and lessen nausea (in
my own person I have experienced their good
effects). refrigerant-diaphoretics and
diuretics are also valuable auxiliaries
during the period of high febrile excitement.
Under this plan of treatment 80 cases of
100 will shew evident signs of amendment.
The heat of skin is reduced, the pains
abated, the eye resumes its natural color.
the thirst is lessened, and in short the
patient expresses himself greatly relieved.
Should this favorable change have not
taken place, delirium, vomiting and
the other bad symptoms ensue. The
Cold applications are discontinued as

the heat and vascular action subside.
blisters to the epigastrium and stimulants are employed to restrain the irritability of stomach. solution of camphor in ether Carb. ammon. opium. quinine. all prove valuable remedies in the latter stages of the fever. By this treatment some will recover. Convalescence is very tedious. From the stage in which black vomit is the prominent symptom very few recover. The stimulating plan of treatment is resorted to in these cases, but with little success. I saw but one individual recover from this. large quantities of brandy were administered to this person the stomach gradually became retentive. the eyes and skin of a vivid yellow and he soon fell into a refreshing sleep. Convalescence however was very protracted and he was subject for some time to disorders of the digestive apparatus.

In the inception of this fever anomalous symptoms sometimes occur which require a different method of treatment. Very often diarrhoea is present this may be treated successfully with the Acet. Plumb. Very little blood must be taken from persons of a weakly habit. Under the treatment I have described, the mortality on ship-board was scarcely 1 in 100. The epidemic was however comparatively mild in its nature.

It would be easy to extend these remarks to a greater length, but I have confined myself to leading points and the limits proposed in the outset. In conclusion I have only to say that it has been my utmost endeavor to make a faithful report and trust it will meet with your approbation.

Very Respectfully

An

Inaugural Dissertation

On

Remittent Fever

Submitted to the examination

of the

Provost, Regents & Faculty

of Physic

of the

University of Maryland

By

Alfred Edelin

of

Prince Georges County

Maryland

February 1850

Remembering that as a student of medicine
I have had but little opportunity of seeing disease
at the bed side of the patient, and from the enor-
mious catalogue of diseases the human syst
em is liable to, expite a subject of much consid-
eration and embarassment, which of the many
diseases I shall take for my maiden essay
However I must content myself by detailing
a mostly theoretical sketch, owing to my limi-
ted experiance in practice,
Among the most common diseases which pre-
ail in this country and particularly in the
southern counties of this State, is Remit
ent or Bilious Fever,
This disease in my ~~subject~~ opinion is
essentially the same disease as Intermittent
raging at the same season of the year, in the
same localities and produced by the
same cause, These two complaints ap-
proach each other so closely in some cases
that it may be difficult to decide, which

of the two it belongs. In many cases the paroxysms occur at regular stated intervals like those of intermittent, and like them consist of a cold hot and sweating stage, though not so distinct or decided. With the same regularity in the recurrence of the paroxysms, in other cases there is no cold stage after the accession of the disease, and the sweating stage may be either slight or wanting. In others again there is merely a fluctuation in its course, at one time rising into a moderate exacerbation, at another only a moderate remission, without forming a well defined paroxysm

Remitent fever has the same types as the intermittent, the most common is the quotidian with its paroxysms occuring every day, the tertian every other day is not uncommon, the quartan is of rare occurrence, next perhaps to the quotidian is the double tertian, having a daily paroxysm but that of day differing from that of

the other and the alternate days resembling each other both in time of occurance and character,

Thus may all the paroxysms occur one in the morning and the other in the evening and those in the morning may be regular while those in the evening somewhat modified the remittent may be considered a double tertian, when having an exacerbation every day, yet on the alternate days much worse, Sometimes we have two exacerbations in one day and only one on the succeeding day and cases sometimes occur in which it is difficult to determine the principal of association between the exacerbations as they sometimes make their appearance so irregularly and when least expected, The first onset of the disease seems to take place indifferently as to time, occuring at one time in the forenoon at another in the afternoon, and occasionly at night

and a tendency afterwards to the recurrance of the paroxysms at the same hour.

This disease may be divided into two distinct variaties, first, into a greater or less severity, and secondly to a greater or less energy of system which attends, In both, bilious fever varies much, the violence of the disease, may be of all conceivable variety from a mildness which scarcely confines the patient to bed or the interposition of remidies to severity which demands the most rigid treatment, for the preservation of life, and against which all the resources of nature and art fail, The state of the system may give rise to marked varieties of this disease, for instance when the state of the System is of a sthenic or asthenic character, in the former with its blood rich and abundant, and all its vital functions vigorous, or in the latter feble and depraved owing perhaps to some debilitating

cause, as by exposure, previous sickness or by intemperance or anything that would tend to debilitate the system, In these two conditions the febrile action partakes of the nature of the vital forces, in the former, it being well developed and energetic, in the latter feeble, with deficient reaction and a tendency to prostration, and when the blood is depraved it is apt to run in to a typhus form Fortunately however in most cases there is an intermediate state of strength, being only slightly elevated or depressed from the natural standard of health.

For several days before the commencement of the disease the patient is affected with feelings of languor, weariness, headache, loss of appetite, more or less disorder of the stomach and bowels, the hepatic functions impaired, and after a few days have elapsed, fever is set up, ushered in with a chill of more or less severity, Sometimes amounting to a

slight chilliness with alternate flushes of heat,
at other times the sence of chilliness is imm-
ence, and in some cases so severe, that there
is a sensible shivering observed even by the
bystanders, These figures may continue for a
longer or shorter time, averageing from a few
minutes to several hours, If the tongue is exam-
ined about this time it may appear slightly
fuzed about the root, the pulse excited and
the complexion somewhat altered, looking dir-
ty or sallow, These symtoms occur however
in various degrees in different cases, and some
frequently wanting, During this prelim-
inary period the patient is going about, and
engaged in his business pursuits, though
languedly In many cases no such premon-
itory symtoms are observed, and the patient
is attacked in apparantly good health,
The face is flushed usually pale and the
eyes of a sparkish hue, Occasionally there is
nausea and vomiting with thirst and pain

in the loins and cramps in the extremities
For some hours after reaction the patient is
liable to chilly sensations upon every change
in posture, which brings the patients body
in a cooler portion of the bed,
When febrile has ben set up the patient
feels uncomfortable warm, the skin hot
and parched, the surface somewhat redend
and expanded, the respiration hurried the
pulse increased in frequency and fulness
and sometimes in force, beating from
ninety to one hundred and twenty in the
minute, It is generally open well developed
and of moderate force, but not hard and tense
The tongue is coated with a thin fur about
this time, There is either loss of apetite
with often a loathing for food sometimes
with or without nausea and vomiting
The patient complains of much thirst and
headache, The face flushed and eyes
suffused, There is a great deal of pain

complained of in the region of the stomach back and loines and extremities, there is much restlessness and wakefulness amounting almost to delerium, when not delerious the patient is sensous of great muscular weakness and is obliged to keep his bed these symptoms continue for a longer or shorter time without abatement, after which the skin begins to moisten and relax first upon the neck and face and gradually over the whole body, the patient now experiences much relief and falls into a pleasant sleep and when he awakes feels apparently much refreshed the patient now is much relieved of his headache, and it may entirely have abated, the pulse now is nearly natural or quite so, the skin is cool and soft, the tongue disposed to clean of its fur and food is now sometimes taken with relish this is the termed the remission,

It is frequently not so complete as the description attached to before, but in all cases of this disease the remission is of longer or shorter duration, Its duration varies much, in some lasting only an hour or two, in others lasting a day, as may be the type of the fever,

Another paroxism is next set up somewhat like the first, beginning with a chill, and subsideing with perspiration, but sometimes with out either one of the other, This ends in due time in another remission and so continues the alternation each exacerbation becoming for the most part more protracted and severe, and of shorter duration, until the disease at last reaches its maximum of severity, Though in many instances there is no distinct remissions evinced, only by a less number of beats of pulse, by the the skin becoming cooler and the suffering of the patient somewhat less in the morning

than in the evening, This disease sometimes runs into a continued form, and occasionally partakes of this nature from the begining of the complaint, The pulse is now more frequent than at first, its beats amounting to one hundred and twenty or more in the minute, There is also an increase in its force and tension, owing perhaps to one or more organs being in a state of inflamation, The tongue at this stage of the disease has become thickly covered with a ~~thi~~ whiteish or yellowish fur, but as the disease advances it becomes of a brownish or blackish especially in the centre,

When the disease has taken a higher grade the tongue becomes dry and often presents a fishered appearance, It is generally disposed to be dry during the paroxisms, and become soft in the remission, The sides of the tongue when not covered, by fur, presents

red appearance and owing to swelling it is sometimes indented by the teeth, Nevertheless the tongue in moderate cases is disposed to keep moist

In most cases there is extreme tenderness in the epigastrium, and in some so great that the patient cannot bear to be touched upon the part affected

There is also a feeling weight and oppression in the region of the stomach, occasionally with a burning pain, which in some instances the amount of pain almost intolerable

This tenderness and tenderness are not in general experienced in any marked degree until the third or fourth day of the disease and after to increase with the advancement of the disease, These are the most striking symptoms, combined with these we frequently have an irritable state of the stomach, sometimes this irritation is exces-

ive anounting sometimes to nausea and vomiting, though often present from the begin ing become more troublesome as the disease advances in severity, The matter ejected is generally of a bilious nature and of a yellow or greenish colour, sometimes dark and of an acrid bitter taste, Sometimes there is a glairy mucous, and occasionly whatever is swallowed,

It is not unfrequent a subject of much difficulty to get any thing to be retained on the stomach, either medicine or food This nausea is so great in some instances as to cause the pulse to fall several beats lower than before and the skin to relax and the headache as before existing to be diminished

These symptoms are most generally constant attendants upon this disease, However there are many mild cases which run their whole without any of these phenomina

and there are others so severe the disease seemes to be consentrated on one organ almost entirely, in some cases the brain in others the stomach seemes to be the organs principally affected

The bowels are usually constipated especially in the early stage, though we find no difficulty in general to procure an evacuation per rectum, The stools are generally of a discoloured appearance sometimes dark and offensive and showing a deficiency of bile but most common colours of a black yellow or greenish appearance,

When the disease is somewhat advanced we sometimes have a bilious diarhea, occasionally with dysenteric symtoms, In some cases we have looseness of the bowels from the begining, and as nausea and vomiting are occasionally present at the same time, the complaint is mistook

in such a kind of a cholera morbus
If there are any worms in the alimentary
canal they are generally discharged,
The urine is generally scanty and
high coloured of a yellowish brown or
reddish and turbid, and later in the disease
of a dark reddish brown colour,
Early in the disease the flow of urine is
generally copious, especially during the
remission, though clear, upon cooling
deposits a latteritious sediment upon
cooling,
Probably the most characteristic
symtom in this complaint is the yell
owish appearance of the skin, and
white of the eyes, this however generally
does not make its appearance until the 4th
or 5th day of the disease, in some cases it
makes its appearance from the begin
ing, In some cases it presents an
uniform appearance of bronze over the

whole body, Where there is bilious diar
hea the discolouration is said not to be
so intence and under the same
circumstances the urine is not so
high coloured,

There is geneally a strong tendency to
disorder of the nervous system, headache
is one of the most common symtoms,
not unfrequently it begins it begins
with the fever, and continues through
its whole course, though less severe
during the remission, Along with it
we frequently have vertigo roaring in
the ears, and sometimes with intoler
ance of light or sound, with beating
of the carotids, redness of the eyes, flushing
of the face, showing a strong determin
ation to the brain,

Delerium though not a common
symtom in this disease at the beginning
is now set up, however not with much

severity, displaying itself rather by confusion of speech than by any violence.
Sometimes there is great stupor or drowsiness, Hiccough is an occasionally troublesome symptom, occuring in some instances quite early in the disease but as a general rule not until very late in its course,
Such are the symptoms which characterize a well case of Remittent fever,
Various other accidental phenomena are frequently met with in this disease, but as the subject is that of Simple Remittent fever I am in hopes I will be excused from detailing its various complications
The duration of bilious fever varies much, averageing a longer or shorter according to the severity of the disease and the proper management of the disease, In some cases the patient recovers in a very few days, but in others it

may last for several weeks and even for months, In mild cases the convalescence is generally rapid and favourable, In severe where there is considerable organic injury inflicted on the system or the vital functions protracted, the return to health is through a varied and protracted course of suffering, The pulse remains frequent, the tongue furred, the appetite languid, the digestion badly performed, and the bowels either disposed to constipation or looseness The patient is very much annoyed by night sweats, which serve to keep the patient weak, and from which cause it seems to originate

The nervous system is often deranged evinced by wakefulness, disturbed sleep, depressed spirits, &c,

The spleen is much enlarged

in some cases, also the liver giving rise to dispepsia, jaundice, dropsy and various other varieties disorders,

When the apetite returns it is voracious generally and caution is necessary to prevent the overtaxing the yet feble organ, Relapses are not uncommon,

We might from the symtoms of the case, anticipate finding various organs presenting signs of inflamation after death,

Among the most common and frequent lesions met with, is that of mucous gastritis, But this is sometimes found wanting, and frequently so immoderate in degree as altogether insufficient to account for the phenomina of the disease, The mucous membrane of the bowels are sometimes inflamed Some writers have spoken of the gland of Brunner having been found in a state

of inflamation and ulceration, but this is not uniform, Signs of inflamation and ulceration of the brain have not unfrequently been noticed

Sometimes the lungs also become inflamed but more frequently the seat of congestion The heart is sometimes found softened flaccid,

The liver is always found enlarged and generally more or less softened but decided marks of inflamation are seldom found, The most striking phenomena probably revealed by the knife is the complete loss of its natural colour and a substitution of a bronze or slate colour, The Spleen is always enlarged, sometimes 4 or 5 times its natural dimensions, It is also softened so much so as to resemble loosly clotted blood, Sometimes of a black colour, others of a reddish, like the lees of red wine

The blood in bilious fever as drawn in the commencement of the fever generally ~~coagulates~~ coagulates without presenting the buffy coat, At a more advanced stage however it is often found buffy and even cupped, probably in consequence of the development of inflamation setting in some one or more organs, In severe case it has been found partially disorganized, and in malignant cases black and either partialy or entire ly uncoagulable,

The essential cause probaly is miasm many believe while this is the true cause it may be produced by other causes, as a great degree of heat and moisture, or any great exciteing cause, There cannot be a doubt but but that remittent fever results from the same cause as intermittent, The former probably occurs preferably to the latter when the cause is highly concentrated and

and powerful on the patients system
peculiarly susceptable, Hence Intermittents
are most common at the close of the
sickly season and on the approach of
cold weather, Remitents sometimes
appear to prevail epidemically, spread-
ing over wide districts of country, which
had previously been exempt from the disease
But even under these circumstances it
is highly probable the same cause
produces it, Certain seasons seem to
favour the development of the poison
and as a proof, That even apparent
epidemics, it is really the same emi-
nations that act, The disease still occu-
rs at the same seasons. We never hear
of Remitent fever raging in the
winter as an epidemic,
It a strange fact that the negro though
not entirely exempt from miasmatic
fever, is much less liable to the

disease than the white, Hence the coast of Africa which is so fatal to the white, is favourable to the negro, and the negro works and lives in the rice fields of Carolina at seasons when a single night would kill the master

Moreover persons who dwell in miasmatic districts are much less liable to the disease than strangers who incidentally visit them, and after an attack of the disease, persons are not so liable to another attack,

The period at which accurs, after exposure to the cause differs in different cases, It often we see the patient cold stage which in general too brief, and in other respects inconsiderable to require treatment, In some cases however it is unusually long, and the system depressed, so that the intervention of remedies become necessary, under

these circumstances the case must be treated in the manner recommended in intermittents, After reaction attention should be paid to the alimentary canal, If the bowels are constipated, a good cathartic should be given, and as the liver is always more or less involved a mercurial cathartic is probably the best, Depletion and derivation from the brain are also desirable, On all these accounts it is proper to give a full purgative medicine, Calomel is decidedly the best, It is retained better retained upon the stomach, and has a special tendency to act upon the liver and promotes the secretory functions, and thereby unloads the portal circulation, while it also tends to free the blood of its biliary matter which may have been redundant in that fluid.

From eight to sixteen grains may be given alone, and followed in six or eight hours, by half an ounce of Sulphate magnesia or other saline cathartic or it may be administered in combination with some other cathartic, as rhubarb, jalap or compound extract of colocynthe, each eight or ten grains at a dose.

After the bowels have been thoroughly evacuated it will be sufficient as a general rule, during the rest of the complaint to keep the bowels open once or twice a day. Another very important remedy in this disease is the lancet There are however many cases in which it is altogether unnecessary and actually hurtful, Bleeding therefore must not ~~under~~ indiscriminately be used, The force of the pulse may be reduced, and the strength of the patient exhausted and

yet the fever shall not have abated an
iota of its violence or duration, The
only true use of venesection, in remitent
fever is to prevent organic injury or inflam-
ation or local determination of blood
But as these are the sometimes immediate
cause of death it is of the utmost imp-
portance to be able to control them
and bleeding becomes one of the most eff-
icient means for this purpose,
Hence the indication for this remedy is
the posture or apprehended existence of
inflamation or sanguineous congestion
Yet these constitute indications, there may
be indications otherwise which counter
ballance them, and bleeding, is not
always advisable even in cases of inf-
amation, It is seldom that more than
one full bleeding is necessary,
After the evacuation of the primæ viæ
and the use of the lancet, if that may

may be required diaphoretics come in with great advantage, In the early stage the refrigerants diaphoretics only should be used, When the stomach is not irritable the antimonials may be used, from the tincloth to the sixteenth of a grain of tartar emetic, may be given every hour or two, Antimony with nitre is sometimes a very efficient remidy,

The effervesing is likely the best diaphoretic in this fever, a dose of it should be given every hour, and when given cold it is always found refreshing and agreable to the patient, It is also one of the efficient means of correcting nausia & vomiting and one of the most certain and prompt diaphoretics, It sometimes occasions grasping paines in the stomach, which can be rectified by the addition of a few of laudanum, The warm bath may now be serviceable in connexion with the diaphoretics by inducing a relaxation of the

surface, The external application of cold water or ice is also benificial during the febrile stage, The spongeing of the arms, face, &c afford much comfort to the patient, Some have recommended the cold dash and speak highly of its utility, In mild cases few other remidies are required, besides those above mentioned, When the remissions are distinct, and approach the interm itent charachter, the cure may be great ly favoured by the use of Quinine during the intervals, in doses from grs iij to, v, every two or three hours, Great attention should be paid to the diet in this disease it being of the blandest kind, and if posa ble the patient should be removed to a healthy neighbourhood as the change is of great aid in the promotion of a cure, But before concluding, You will allow me to express my thaks for the benefit I have received from your ~~hands~~ halls and

from the clinic instruction from you
in the wards of the Infirmary, both in the
Medical and Surgical departments, hoping
that the knowledge obtained while here
as a Student, may be placed to a good
account, when a Practitioner,

Your friend &c

Alfred Edelin

An

Inaugural Dissertation

On

The Signs of Pregnancy

Submitted to the examination of the

Provost, Regents, and Faculty of Physick

Of The

University of Maryland

For The Degree

Of

Doctor of Medicine

By

John Wm Millar

Of

Maryland

1850

Gentlemen

I have been not a little puzzled in the selection of a subject, upon which to write, my inaugural essay All that will be necessary for me to do in the accomplishment of the requisition imposed upon me ~~by~~ by the rules of your institution ~~[illegible]~~, will be to explain in the plainest and most comprehensible manner, the signs presented by the female during the period of gestation. The subject is one of peculiar interest to the members of the profession, and to those who soon hope to enter her honoured ranks— —in more than one particular point of consideration — The reason of which will become obvious, when we take into view the disastrous consequences, which would be likely to ensue

to the peace, happiness and character of the individual, implicated wrongly in our conclusions; besides the unenviable reputation, which he would acquire for himself, among a community of old women, who are always ready to put down a young man, just at the time when small impediments have great effects — Still greater would be the mortification to himself, if he were called upon, in a medico legal point of view to say if a female was pregnant, - and he was to find himself incompetent for the task, The reflections which it would cast upon the profession is another reason which should guard him in coming to too hasty a conclusion, where honour is greatly implicated in that conclusion

The general condition of a pregnant female is plethoric, the pulse is quicker and fuller, and the blood augmented in quantity as well as changed in quality, as is proven by the buffy coat, showing an increased amount of fibrine, for the nourishment and development of the fatus in utero, Just as soon as the woman is impregnated, more or less sympathetic irritation is set up in some distant organs — The Stomach is most likely to suffer, as proven by the morning sickness. The viscera concerned in digestion, are often deranged - and the renal secretion altered. The skin often times changes its colour. In some women the amount of areola tissue, is augmented, whilst in others it is greatly dimenished. In enumerating the signs of pregnancy as they occur in order, I can do

no better than follow Dr Churchill whose work is recommended by the professor of obstetrics in this school Cessation of menstruation is one of the first symptoms which would lead to the conclusion of pregnancy - but which often occurs from some external circumstances, and is of little value as a diagnostic sign, without other corroborating circumstances - This cannot be conclusive enough to hang a woman - as instances are on record in which Menstruation continued during the whole period of utero gestation. - But if the catamenia does not appear at the proper time, and if at the second period they still are absent, it is deemed conclusive or nearly so. It has been asserted that women never had menstruated before conception, and as soon

as it occured, the discharge appeared regularly but after delivery it ceased until impregnated again. A good amount of importance is attached to this sign, which is strengthened by the absence of the discharge at several regular monthly periods

Morning Sickness an instance of sympathetic irritation which occurs immediately after rising in the morning, continuing from ten minutes to one hour or two, after which it wears off, the patient feels no more inconvenience until the following morning, when it is likely to recur. This sickness generally commences about the fifth week after conception, and continues till after the end of of the third month, when it spontaneously ceases. It has been stated to have commenced immediately after

conception and lasted during the full term of gestation, and some have even stated that the stomach rejected every thing and the patient died of inanition. No definite duration of the morning sickness can be laid down, as each individual case differs. As an evidence of pregnancy, its occurrence at the regular time and in the usual manner, is of great value, when combined with other symptoms

Salivation. Not of frequent occurrence, but is undoubtedly another instance of sympathetic irritability. The parotid, Submaxillary, and sublingual glands enlarge, and about this time a considerable quantity of their secretions are poured out into the mouth. This may occur at any time during gestation, and last for a longer or shorter time, It may It may be distinguished from the mercurial

salivation by not having the peculiar fator, by the absence of Sponginess and soreness of the gums, and by the ~~absence~~ presence of pregnancy

Enlargement of the Mamma will be first observed about the end of the sec- ~~co~~ ond month, which is Sympathetic with the enlargement of the Uterus from any cause whatever, but most generally furnish ing a valueable indication taken in con~~ct~~ junction with the areola, which appears in pregnancy. She feels an uneasy sensation of fulness, and tingling pains in their sub- stance and at the nipples, The breast may enlarge from various other causes, noticed in cases when the catamenia were suspen- -just before the first menstrual period in young girls, and just after this func- tion has ceased in old women, and a milky looking fluid secreted in both instan- ces, which simulates very closely the Pharo- cological character during pregnancy. The

areola may be very manifest about the fourth or fifth month. The diameter of the circle varies from one inch to two. The colour of the areola is considerably darker than the surrounding parts, which increases until the proces of gestation is completed - when the colour of the integument aroung the nipple has been once modified by pregnancy and nursing, it is no longer, a conclusive criterion, Milk in the breast cannot furnish us with any thing very conclusive, for we find it very often when pregnancy does not exist, - but it like most of the other signs forms only one of the many, before we can come to accurate and definite conclusions, From what has been said, it will appear conclusive that the signs presented in the early months of gestation, are not satisfactory enough to pronounce emphatically, either one way or the other

– but our opinions must be sus–
tained by reason before making any
assertions. It is not, however until
the latter half of gestation that we
can obtain positive evidence, which
can neither be simulated nor evaded

Enlargement of the abdomen, must
as a natural consequence follow the
impregnation of the uterus, which
gradually increases in size until the
whole cavity of the abdomen is filled
– Gradual and equable enlargement of
the abdomen sometimes takes place
from other causes than pregnancy
Ascites gives the abdomen very
much the same appearance, but
which can be with absolute certain–
ty distinguished by practice, Succus–
sion &c by the Uterine tumour feeling
firm, hard, elastic, and defined, preser–
ving its form in all positions of the body

and does not so completely obey the law of gravitation, as a fluid does contained in the abdomen. Instances do occur which are very embarassing to the practitioner - such as the enlargement of the uterus from other causes than pregnancy, and then the abdomen will have the same form and cannot be distinguished without taking into consideration the previous history of the case, and watching its progressive development.

Quickening - is another of the signs, which taken in conjunction with others, proves pretty conclusively that the female is pregnant - it is the first movements of the child, perceived by the mother, and it was supposed that the child now first became alive, which is altogether an erroneous opinion. This sensation is not produced by the child - but by the peristaltic contractions of

the Uterus itself, but why it occurs at or about the fourth month has not as yet been explained. This is a valueable sign when looked at in conjunction with those before given. But it is less-sened as it is given by the mother who is not in all instances capable of describing her own sensations, and whose imagination strongly influences her conclusions

Those fatal movements may be felt by the practitioner - placing his cold hand upon the anterior part of the abdomen, and when once felt is pretty conclusive

Ballottement or Repercussion may be practised most successfully during the fifth and sixth month, which consists in placing the finger upon the cervix uteri, and the other hand upon the abdomen - then gently and quickly elevate the point of the finger, which will cause the fetus to float up in the liquor amnii

— when gravitation will bring it back upon the point of the finger, causing a gentle shock. This cannot be mistaken for any other condition, and is conclusive. You cannot of course tell as to whether the fatus is dead or alive. Auscultation has been applied to ascertain the presence of a fatus in utero and this may be easily ascertained by placing the patient in bed and applying the ear or Stethoscope immediately over the sounds in the abdomen, and no matter what is the position of the fatus the sounds may be heard, and in other instances no matter how favourable the position of the fatus may be they cannot be distinguished. Uterine Souffle is a single intermitting whirring sound heard over a certain extent of the uterine surface and is said to be very similar to the bellows sound of the heart — it is Synchronous

with the pulsations of the Mother, and is subject to the same changes, in point of frequency of beats as the maternal heart and may always be heard before the fœtal heart begins to pulsate. The period at which it is first audible is about the fourth month, Sometimes earlier, and sometimes later. The seat of this sound is undoubtedly situated in the uterus and believed to indicate the seat of the placenta — The presence of this as a positive sign is almost certain, but not entirely so as it has been heard in disease of the Uterus — Nor is the absence of this a negative sign, when others are present. Pulsations of the fœtal heart is similar to that of the adult being more frequent and feeble. and conveying to the ear a double impression Those pulsations (as an average) may be heard during the fifth month and when once heard affords conclusive evidence of preg-

nancy, and in fact says (Dr Meigs) this is the only certain Sign which we possess. all the others being fallacious and deceiving The imperception of the fatal circulation is not a positive negative proof, as it sometimes happens that they cannot be heard. Funic Souffle - consists in hearing the circulation in the cord which can be accomplished if the situation of the cord be favourable, and has been stated to give a strong souffle to the ear which has been stated to be caused by the blood passing through those tortuous vessels. A principal has of late been discovered in the urine called H Kiestine which has added another to the many signs presented during pregnancy, but it needs further investigation to make it worthy of much attention as a diagnostic sign of a female's being in that interesting condition. Twin Pregnancy may offer an obstacle by the confusion which

both fatal hearts may cause, and this cannot be proven to exist without both hearts can be heard separately, and at some distance apart. And when this is fully ascertained, you may be positive that the conception is double. Having briefly pointed out those circumstances which would lead one to suppose the presence of a fatus, I shall now come to a conclusion — and hope that my efforts have not been altogether in vain. Although it is but an imperfect statement of the circumstances connected with pregnancy, I hope it will be quite enough to guide one in his future career to definite conclusions, respecting a subject of so much importance to the practising physician — because the discussion of that subject involved one of the most delicate points in respect to the happiness and character of many females

An

Inaugural Dissertation

on

Physical Signs

in

Pulmonary Affections

Submitted for Examination

to the

Provost, Regents, and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

By

Eli I Keedle

Of Maryland

A.D. 1880

To

William Power, M.D.,

Professor of Theory and Practice

in the

University of Maryland,

as

A mark of respect

for

His professional character

and

High attainments in

Physical Science

This Essay

is respectfully inscribed

by

The Author.

In the selection of a subject upon which to write an inaugural thesis we have not been so much directed by the beauties of the subject and the probabilities of success as by its living interest and the great amount of useful and practical information that may arise from its consideration We feel quite sure from the nature and extent of the subject chosen that we shall fail in a great degree to do it that justice which its eminent merits demand; yet this shall not deter us from attempting to inform ourselves and write as our limited abilities may best enable us.

All subjects in medical science and especially those directly connected with the investigation of the nature and treatment of diseases are truly of the most vital importance: but the subject of physical examination, being as it is a branch of our profession newly introduced and as yet only partially and imperfectly studied by the great mass of the profession presents itself to the student and young practitioner as

as one of the most paramount importance, for, by its almost sole assistance he is enabled to unravel and clearly demonstrate a class of the most fatal diseases and which without it have, and always must lie enshrouded in the darkest mystery and uncertainty Among diseases of the chest may be enumerated many of the most serious and fatal diseases to which flesh is heir, and although they have been made the subject of careful study by many of the fathers of our profession for centuries past, it has been left to the persevering industry and correct investigation of modern minds to lay fully before our eyes the changes there effected, and to place in our hands the ready instruments for detecting those changes during life. Pathology, by elucidating the changes in the position and structure of parts during disease, has indeed won for Medicine one of her brightest laurels But auscultation and percussion by enabling us to detect and foretel those changes while life is yet in the reach of remedies has also achieved for her a victory no less admirable and noble. Both

Both of these branches of science are intimately concerned in the proper study of a large number of our most fatal maladies, and both seem as yet to be in their infancy. What subjects then, whether we regard future usefulness or success commend themselves more to the student of medicine than these?

The signs afforded by the physical examination of the living body assist materially in the diagnosis of many interesting diseases not situated in the lungs or thorax; but as these will afford us ample material for the present purpose, we shall confine our observations to that portion of the system and especially to the lungs and their investing tissue.

It is simply by the skilful application of our senses, the senses of seeing, feeling, and hearing that the whole process of physical examination is accomplished. And the most important of these may perhaps be best considered separately under the following primary divisions. Viz:

Inspection, Palpation, Mensuration, Succussion, Percussion, and Auscultation

All of these modes of examination are perhaps unnecessary in any one case, yet each is capable of giving useful information and in cases at all doubtful should not be forgotten or neglected

In the consideration of these several means, we will not be able from the limits of the present article to speak of all the particulars connected with each, or indeed of all that would be interesting or useful, we will be compelled therefore to content ourselves with a brief consideration of each in proportion to its relative importance

Inspection, the division which appears first, informs us very well by its ordinary meaning what also is meant by it in medicine

The amount of certain information obtained by a careful inspection of the external proportions and conformations of the chest, will depend much upon the habit, sex, and constitution of the patient. As a general rule less information is obtained from the corpulent and fleshy, than from the spare and emaciated. And in females there

there will be observed a difference in the conformation of the chest depending on their peculiarity of dress. In a healthy individual the chest usually presents a full round and even appearance, the integuments covering the clavicles and scapulae are smooth and but slightly elevated in the region of the bone, the intercostal spaces are even or but slightly incurvated, and when the individual breathes the whole thoracic region expands in an easy even and elastic manner, the opposite sides & sides of the chest are almost identical in size and appearance except that the right may be a little the more fully developed.

These then bring briefly the healthy characteristics any alterations in their external conditions or relations may be indicative of a diseased condition of the organs contained within. The principal of these changes noticed in diseases may be on the one hand a general emaciation or inequality in the external surface, great shrinking or inequality falling away of the supra scapular and clavicular regions,

adhe-

adhesions of the integuments as if bound down to the bone, prominence of the Sternum, clavicle and ribs, great depression of the intercostal spaces and inelasticity and want of expansion in respiration; Or on the other hand unusual fulness of the chest and prominence of the intercostal spaces of all or a portion of one or both sides, great enlargement and distension of one side with contraction and diminution of the other together with great inequality in the mode of breathing Sometimes, the whole expansion and contraction being performed by the muscles of the chest independent of the diaphragm, which is termed "high respiration or perfect inaction of those muscles, the function being performed solely by the diaphragm, giving what is commonly known as "low or Abdominal respiration" These with many other changes that might be enumerated, are ascertained by a simple but careful inspection of the external configuration of the chest, and knowing the pathological changes that may occur within to produce them, they aid us exceedingly in making correct diagnosis

Mensuration, the next one of the means we have enumerated, although it may be considered of less importance than either of the others save succussion, still may in many instances afford information of a very satisfactory character, and simple and easy as it is in its applications should by no means be overlooked or neglected.

By its application we may determine whether the chest be symmetrical in its proportions and whether one portion be enlarged and another diminished in size by the effects of disease; and by its repeated use to estimate as in pleurisy or hydrothorax the progressive increase or diminution in the amount of liquid effusion. In order that our information from this source be strictly correct it will be necessary to remember that there are some deviations from the normal proportions not necessarily indicative of disease; thus, the right side of the chest is usually more fully developed than the left making a difference of from half an inch to one inch in its circumference, the spine may be slightly incurvated, the ribs projected

or

or the integuments confined by former adhesions, these conditions may exist without any connection with the present disease, and should be exact understood and properly allowed for before drawing any deductions from this method of mensuration or measurement.

Succussion the third mode we have named, has been practiced from the earliest ages of medical science, and is coeval with the profession itself it is mentioned in the writings of Hippocrates, and was practiced by himself and most of the older writers and was at one time considered a very important aid in the diagnosis of disease; but the improvements of modern science have placed in our hands means more satisfactory to ourselves, and less painful and fatiguing to our patients.

It consists in violently shaking the body so that the liquid contained in the cavity of the pleura & elsewhere is made to dash violently against the parieties, thus producing a splashing sound which in some instances may be heard at considerable distance from the patient. But

But as it must appear plain to all that the number of cases to which it is applicable are very few it being requisite that the cavity contain air as well as liquid, its importance is rendered much less consequently than was formerly supposed.
We now possess means more effectual for obtaining the same information, and as its practice must necessarily be weakening and injurious to patients, it has in spite of its antiquity gone almost entirely out of use.
Palpation. Palpation is another one of the means we make use of in physical examinations, it is much more extensively practised in examinations of the abdomen etc than in the chest, but it is capable of affording much assistance here also.
For the purpose of detecting the existence and consistence of tumours and morbid growths in any part of the body, and enlargement, induration or distension of the stomach, spleen, liver, uterus, bladder or other viscera it is in daily use by every practitioner And in examinations of the chest and respiratory organs

St.

It is practiced simply by applying the open hands lightly to the walls of the chest and carefully noting the sensations produced when the patient breathes or speaks. In the healthy condition the sensations transmitted to the hand are those of slight tremor with the elastic and equable expansion of the parieties, and the absence of these may indicate that a corresponding portion of the lungs is obliterated or at least rendered incapable of performing its proper functions. as, by pleuritic effusions compressing it, or obstruction in the tubes preventing the ingress of air. Or its increase producing a rough and grating sensation may denote the existence of tumicae or the solidification of the parenchymatous structures with bronchial respiration. These intimations though not sufficient of themselves to make certain diagnosis are exceedingly valuable as collateral proofs, and beautifully illustrate the practical application of demonstrated mechanical laws to the material changes of the physical organism. After.

After praping thus briefly and imperfectly over the less important points of the subject, we now come to the consideration of the two branches most important in this branch of medicine Viz. Percussion and Auscultation

When we consider the very simple and long acknowledged rules upon which they depend, and remember that they have been applied successfully in the prosecution of many of the arts & sciences for centuries past, it remains a subject of surprise and wonder that medical men acquainted familiarly as they always must have been with these same laws should never have applied them to subjects connected with their own profession. By the same rule that the vender of wines tapping on his casks estimates the amount of liquor yet within them, the physician too estimates the condition of the internal organs of his patient. Every body when set into sonorous vibration produces a sound peculiar to itself, and it is to the careful study of these sounds as produced in

in the human system that percussion and Auscultation owe all their importance in the detection of morbid conditions. We shall first consider the uses and application of percussion

It appears from the records of medicine that percussion was almost entirely unknown among ancient physicians except in a few cases diseases to distinguish abdominal effusion from tympanites: And it was not until about the middle of the eighteenth century that Avenbrugger its new inventor reintroduced to the profession and employed it extensively in his investigations of disease: his treatise entitled "Inventum novum, ex percussione humani thoracis &c was published in 1761 but appears to have been but little noticed until in 1808 Corvisart made a translation of it, and by the addition of his own labours was enabled to attract the attention and example of men in his day. From this time it gradually engaged the attention of Scientific men until by the very extensive investigations and improve-

improvements of Piorry in our own day it has arrived at its present state of perfection and usefulness.

The manner of eliciting the sounds proper to different portions of the chest on percussion has varied with the progress of the science. Avenbrugger we are informed simply struck against the parieties of the part with the ends of his fingers and Corvisart after him made use of the open hand; this was termed immediate percussion and may have answered very well when a large surface as one side of the chest was to be examined; but for nice distinctions has been superceeded altogether in the present day by the improvements of Piorry. This improvement consists in interposing some convenient body between the fingers and the part percussed This body is called a pleximeter, from (πλησσω and μετρον.) and is best constructed of a piece of solid Gum elastic about two inches long, one and half wide and half an inch thick, this

this possesses advantages over any artificial pleximeter of wood, ivory or metal so obvious as to need no discussion. But for reasons still more apparent in many investigations and especially those of the lungs the best of all bodies to strike upon is the middle finger of the left hand. Percussion should be made with the end of one or more fingers of the right hand brought evenly to the same line.

In percussing the body of the patient must be varied of course, according to depending on the part under examination, and the percussor should as much as possible assume an easy position, and also avoid any noise or other circumstance calculated to interrupt the proper appreheusion of the sounds. It should be performed with a light quick stroke to produce the purest sound possible, with the fingers of the right hand bent nearly nearly at right angles and allowing motion in the wrist joint only, and maintaining the body as much as convenient in the same position during the whole operation. By a careful observance of these simple rules we

ur may be enabled in a short time to perform the operation with ease and at the same time obtain the most correct information as to the condition of the internal organs.

When proper percussion is made upon the chest or any other portion of the body the sounds elicited will depend first upon thickness or density of the parieties of the cavity, and secondly upon the position and condition of the organs contained within and as the thickness of the walls of the chest vary in different regions, it will be necessary to explain them before we can properly appreciate the value of percussion as of Auscultation also.

In the anterior region immediately above and below the clavicles the sounds will be clear —— as we pass downwards over the mammaries and especially in females from the amount of the interposed tissue it becomes duller. and again clear below that space until we arrive at the liver on the right and the spleen upon the left giving from the density of their structure a decidedly dull sound

In

In the praecordial region also, a space from one and a half to two and a half inches square a sound duller than the surrounding parts also occurs and the tympanitic sound heard over the ensiform cartilage is owing to the presence of gas or air in the stomach.

In the posterior region, the scapular portion owing to the amount of muscle here situated will render the sounds indistinct. In the infrascapular region immediately on either side of the spinal column it is perhaps the most resonant region of the chest, as also the dorsal regions below those just named and corresponding to the lower lobes of the lungs. Also on the lateral portions from the axilla downwards to the liver or spleen an unusually clear and resonant sound will generally be produced. Finally by simply bearing in mind the natural anatomical differences of structure we will always be enabled to understand and make the proper allowances above referred to. And moreover by the

the attentive study of these sounds as produced in health, we will be much assisted in the recognition of morbid phenomena.

The mechanism of respiration, that is the manner in which the breath is drawn into and expelled from the lungs is exceedingly simple and easily explained. The lungs themselves are formed in the first place of a parenchymatous structure which contains within it the air vesicles and smaller tubes and the ramifications of the pulmonary artery and the origins of the pulmonary veins which convey the oxygenated blood back from the air vesicles to the heart, to be again sent forth in the circulation. The whole internal surface of the air vesicles and of the bronchial tubes is lined by one extensive mucous membrane which is continuous with that of the trachea and larynx; while the entire external surface is invested by that reflection of the pleura termed the pulmonary pleura, covering them completely as the peritonaeum does the small & large intestines. During inspiration &

and expiration the lungs are entirely passive, the expansion and contraction of the chest being performed by the alternate contraction of the muscles situated in and upon the walls of the chest. the principal of which are the diaphragm the intercostal and pectoral muscles. the expansion of the chest by these acting produces a vacuum in the lungs, and the air rushing in to fill the vacant space thus inflates the pulmonary vessels and following it the contraction of these walls forcing it out again produces the phenomenon of expiration. Now in the healthy condition the inflated lung completely fills the vacancy thus produced so that the pulmonary pleura is brought in immediate contact with the costal pleura. which forms the inner lining membrane of the ribs &c It would follow then "a priori." from the nature and situation of the lungs in the chest that the sounds elicited upon percussion as before directed would be clear. sonorous or resonant. sounds, and such indeed they really are varying

varying only with the thickness of the thoracic walls
And it will also follow as equally arises from the
same simple acoustic laws that any changes
taking place either in the extent or consistency of
the lungs or their lining membranes & contents will
be attended with corresponding differences of sound
whatever causes give rise to these changes whether
from mechanical violence or derangement of the
vital processes. This then in a general manner
is the condition of the healthy chest. and it is
only by a correct knowledge of the normal sounds
and the physical changes which may modify
these sounds that we are enabled to distinguish
one condition of the parts from another
And it is always necessary to ensure success in this
art first to familiarize ourselves with these healthy
sounds. Percussion is striking upon the part with
the hand but the mind of the percussor gains no
information except by comparing the sound
with a healthy one, hence an individual may
hear morbid sounds forever but if he be unacquainted

unacquainted with the healthy one he is none the wiser.

In disease of lungs the sound may be increased to the greatest degree of resonance, or diminished to the most absolute resonance dulness and want of resonance

First of increased resonance. it seldom occurs that both sides are greatly increased in their sound as the condition of the lung would almost necessarily destroy the patient. Still it sometimes occurs in universal emphysaema and emphysarma of the cellular structure; the increased resonance that we most frequently meet with however is local or confined at least to one side of the chest. Partial emphysaema very frequently produces it of this kind and is sometimes the very type of resonance. A large cavity in the lungs from abscess or softening of tubercles and situated near the parietes will give an increased resonance as also will any circumstance which by perforating the pleura admits air into it

into its cavity, this frequently occurs from external wounds, but as frequently perhaps from the softening of tubercular deposits producing that condition termed pneumothorax, here the resonance is apt to be local owing to the adhesions which usually form around such abscesses previous to their bursting Secondly, There may be diminished sound, that is the sound may be resonant but less so than is consistent with the healthy condition of the contained organs. Here it may be well to mention that a slight diminution of sound from the deposition of fat or thickening of the walls must not be mistaken for disease, It may generally be detected by comparing the two sides, when if they sound differently they may be suspected, but not without

If "Says Avenbrugger" at a point of the chest which is usually resonant when struck with a certain force, equally forcible percussion elicit an obscure sound, there is disease at that point"

This obscurity of the healthy sound is most

most frequently produced by the deposition of tubercular matter filling a portion of the pulmonary tissue, or from any foreign matter getting into the lungs which only partly interferes with their function Millisary tubercles are not unfrequently scattered thickly throughout the whole extent of one or both lungs making this obscure sound occupy a considerable space

Thirdly, dulness, the sound here designated is where there is no degree of resonance whatever the sound produced being as completely dead as though the part were a solid mass of muscle.

"And if" "continues Avenbrugger" "the sound produced be absolutely dull like that from striking a muscular part, the disease occupies the whole extent of this dull space. If then the patient be directed to take a full inspiration and on percussion being made while he holds his breath the dulness be found to continue the disease extends deeply into the Chest"

In pleuritic effusions if of any extent there will always be absolute dulness and this is one of its most certain signs, and these effusions from pleuritic inflammations or hydrothorax may generally be distinguished from the other sources of dulness by their always commencing at the most depending portion and by their obeying the laws of gravity as the patient changes his position, except when the amount is so great as to fill the whole space and thus prevent its movement. The presence of tubercles again, when they fill completely the structure of the part rendering it solid and impervious will give a correspondingly dull sound And we may add what may often assist in diagnosis that phthisis most frequently commences at the summit of the lungs.

Pneumonia also when it has progressed to the stages of red or grey hepatization from the effusion of lymph rendering the mass a perfect solid, gives a sound also as perfectly dull. The presence of pus or blood also in the lungs, as in pulmonary apoplexy

Apoplexy, or wounds or abscess or tubercular cavity bursting and producing the condition of empyemia will for the same mechanical reasons produce the same sounds. and the extent of the injury and the extent of the dulness will usually correspond.

There are still two other variations in sound sometimes produced in percussion which as they differ in character and are produced only under peculiar circumstances will here be mentioned separately. The first sometimes termed the metallic sound from the metallic ring it emits is generally obtained when a large cavity containing both air and liquid exist near the surface of the chest. It is something like the sound produced when tapping a cask partly full of any liquid. It is very satisfactory when heard but it is arises from the circumstances necessary to its production that it is not frequently met with.

The second sound is heard when a cavity as before containing both liquid and air, and having

having flexible walls and communicating freely with one or more of the bronchi. This kind of a cavity if pressure be made upon its walls the sudden expulsion of air and ligeuid from the cavity produces the sound in question It informs us very certainly what the condition of the parts is and once heard is better than any attempt at description: it has been very aptly compared however to the sound produced when the palms of the hands are folded together and the back struck against the knee. the sudden expulsion of air here produced simulates very well the sound in question, but of itself this sign would not justify us in a diagnosis. if true disease exist there will be others also

From what has thus briefly and imperfectly been stated of percussion it will appear obvious upon a moments reflection that the information it affords although highly interesting and equally important is still of itself not often sufficient for diagnostic purposes' It

It informs us very certainly indeed of the physical condition of a part and whether that condition be natural. but how they have been produced. by the derangement of what functions or organs or what the therapeutical indications are. we have to look for to another source. Fortunately for us in almost all cases of physical examination there are a number of signs to be obtained which confirm one another and by their united evidence serve to clearly distinguish the nature of the existing malady. The presence or absence of one solitary sign is often sufficient to render the existence of a disease extremely doubtful on the hand. or absolutely certain on the other. All other signs though present might leave a doubt, which the application of percussion may place beyond a doubt But of all the means useful to the physician in the detection of pulmonary affections, that which is most certain and satisfactory, and for the discovery of which the profession and mankind should ever be grateful is Auscultation

Auscultation in medicine is the science art of listening to the sounds produced within the human body, and by the comparison of them with the healthy standard to estimate the existence and nature of disease

It has also been applied to the examination of diseases of many parts of the body, as: the brain, the arteries and heart, and the existence of pregnancy. But its most valuable branch and that which shall principally engage our attention is its uses in pulmonary disease.

For the discovery of auscultation, and the various improvements and additions which it has received bringing it to its present state of perfection, the profession is almost wholly indebted to the immortal Laennec

True an apparent accident first led him to the conception, but it was only by possessing a mind capable of appreciating the worth of the suggestion that its future usefulness was foreseen

"Not only did he lay the foundation of our knowledge

knowledge concerning it, but his indefatigable industry and ardent zeal, the best evidences of his exalted genius brought it very nearly to that degree of perfection which it has now attained and which renders it one of the most valuable instruments ever devised by the skill of man for bringing light out of darkness and harmony out of confusion"

Auscultation of the respiratory organs may be conveniently divided into phenomena of three different orders, Viz. 1st Auscultation of the respiratory murmur and its variations. 2nd. Auscultation of the voice, and 3rd. Auscultation of the Cough.

Some general rules in regard of the patient and practitioner will be necessary, to secure ~~security~~ proper and uniform results.

In Auscultation two methods are in common use, and their relative merits are somewhat difficult to decide upon, one of them being suited to circumstances in which the other is almost

almost impracticable. They are termed Mediate and Immediate Auscultation. Mediate Auscultation is practiced by the use of an instrument (the Stethoscope) familiar in its form and use to almost every one, and possesses the advantage that it may be used in the cases of females and on uneven surfaces and parts not accessible to the ear

The other mode of Immediate Auscultation which is simply applying the ear to the affected part and carefully noting all the sounds produced within. This mode when it is applicable is certainly preferable to the former, as the information it gives is more certain, in many instances it is more convenient and simple and also requires less practice to enable us properly to interpret the sounds we hear. The Physician in auscultating should stand or sit in an easy position and accustom himself to listen with either ear as his convenience and the position of the patient indicate

The position of the patient should vary with the part examined. In examining the posterior parts he should sit or stand with his arms folded on his breast and his body bent forwards. In listening to the front he should sit or stand erect. folding his across his back and elevating his head in order that the parts may be more fully exposed. In auscultating the sides and axillary regions, it will be found most convenient to place the hands alternately on the top of the head &c The part to which the ear or instrument is applied should be divested of all covering calculated to deaden or destroy the sound, one fold of linen or muslin will be found of no great disadvantage and may be allowed in cases of females but heavy clothing or many folds of linen are calculated to destroy the sound and lead to erroneous conclusions.

First then of the respiratory murmur. If the ear be applied to the chest of a healthy individual

individual two kinds of respiration are heard which are healthy in their character, that of the vesicular structure and that produced in the bronchi, the vesicular murmur and the normal bronchial respiration. The vesicular murmur is a soft, rustling murmur more distinct in inspiration than expiration, it occurs in every region of the lungs which contains healthy vesicular structure and when once learned is very easily distinguished from any of the morbid sounds. The normal bronchial respiration is produced in the larger bronchi & confined to the middle portions of the chest anterior and posterior about the root of the lungs and somewhat more distinct in the upper portion of the right than in the corresponding portion of the left lung. It is louder and harsher and more frequently altered by disease than the respiratory murmur of the vesicular structure. Secondly, taking the divisions of Barth and Rogers which are about as good as any

the alterations of the respiratory murmur may be divided into four Classes or subdivisions.— First. Alterations of intensity. Second. Of Rhythm Third. Of character, and Fourthly Alterations by abnormal Sounds.

The respiratory murmur may be changed to an increase in strength or a diminution rendering it feeble or it may be absent altogether. Increase of respiratory murmur occurs when from obstruction or disease a portion of one or both lungs is unable to perform its function, As, in pleuritic effusion on one side or hydro or pneumothorax by consolidation or destruction of tissue from tubercles, or when foreign bodies in some of the bronchi impose a greater function the parts which still maintain their integrity

It is sometimes termed puerile respiration from its resemblance to the louder vesicular murmur which is always heard in the lungs of infants and young children

Diminution in the respiratory sound is of much importance in the early diagnosis of some diseases and especially of phthisis pulmonalis It may occur in the whole of both lungs, or may be confined to certain portions, and is caused by any circumstance which prevents the full inflation and expulsion of air from the vesicles or prevents the proper transmission of the sound to the ear. Thus it is plain that it may exist in emphysema For although the cells are distended the actual amount of air received and expelled in respiration is less than in health. Pleuritic effusions partially compressing the lung will be attended with a diminution in the strength of the murmur And the deposit of tubercles, obliterating the vessels and obliterating the structure will also lessen the natural sound, and this symptom occurring at the summit of the lungs, persisting, and in one predisposed to the disease is always a ground of fearful suspicion

Absence of respiratory murmur occurs when from any circumstance whatever the respiration is entirely prevented, as sometimes occurs from the thick deposit of tubercles or the hepatization of pneumonia, or when extensive pleuritic effusions exert such compression as to entirely destroy the action of the lung or from the accidental admission of air into the pleura collapsing the lung and preventing its action Secondly alteration in the rhythm of the respiration; the length of inspiration and expiration may may be altered by disease as well as the relations which they naturally bear to each other; Partial obstructions to the entrance of air will render inspiration and expiration difficult and will sometimes greatly shorten or prolong them: but that change in the rhythm of breathing which is of more importance than all the rest, is the variation in the proper relations. In a healthy individual the proper proportions are about as three to one, that

that is the inspiration requires about three times the space of expiration, Now that change in these relations in which the expiration is prolonged to the same or even greater length than the inspiration, if it be constant at one part of the lungs, and the patient be labouring under some obscure disease, its detection will almost certainly, [illegible] that our patient has or is going to have phthisis, and more especially if this sign be observed to exist at the summit of the left lung. This prolonged expiration is one of the most valuable aids of physical science affords, and was first noticed by our own Countryman the late Dr Jackson of Boston

Thirdly the character of the respiratory murmur may be changed. It may be harsh in quality that is the sound instead of being soft and smooth as in health may assume a greater degree of intensity, hardness and dryness both in expiration and inspiration and occurs in emphysema and in phthisis. Bronchial or Tubal

Bronchial or Tubal respiration, this is similar in character to the former, but of greater intensity and different seat. It occurs in a great variety of diseases of the pleura bronchi and lungs proper. In phthisis pulmonalis when the vesicular structure is destroyed or solidified the air pervading only the bronchi gives a blowing respiration. In the first and second stages of pneumonia when the vesicular structure is congested the bronchial sound is heard and also when pleuritic effusions compress the proper vessels. It has been termed tubal from its resemblance to the sound produced by the forcible passage of air through a narrow tube; it differs from cavernous respiration in not possessing that hollowness so characteristic of cavities.

Cavernous respiration, is an exaggeration of the former sound, simulated by blowing over the mouth of a hollow vessel, and once heard will seldom be mistaken for any other. It

It commonly occurs about the summit of the lungs, but may be met with in all parts.
They are very generally caused by the softening and expectoration of tubercular matters leaving an empty cavity, by elliptical dilatation, or by abscesses which have discharged their contents into the bronchi or pleura leaving an open cavity
In about nine of ten cases the existence of cavities in the lungs will be found to depend on the previous existence of tubercles
Amphoric respiration; this last variety of respiratory sounds is very similar to the sound produced by blowing into the narrow mouth of a large hollow vessel as a cask, and is accompanied by a peculiar metallic ringing, and may be heard in the greatest perfection, when from perforation of the pulmonary pleura there is pneumothorax with a cavity in the chest.
Fourthly we shall mention those changes which are owing to the superaddition of abnormal sounds
The alterations by abnormal sounds are of two

separate and distinct kinds, The Friction Sounds and the Rales. 1st. The friction sounds are caused by the rubbing of one surface of the pleura upon the other, when one or both are in an inflamed condition. In health the natural secretion of these surfaces renders them moist so that their apposition gives rise to no audible sound, but when from inflammation their surfaces are rendered dry and rough they produce by their gliding surfaces a scraping or rattling sound somewhat similar to the crackling of a parchment or paper, in some instances it is so distinct as to be sensible to the hands applied as in palpation, giving a sense of trembling vibration; it occurs most frequently in the incipiency and decline of pleuritis, especially in the convalescence, Is sometimes produced by the presence of tubercles giving rise to the inflammation, and if this sound persists at the summit of the chest they should be suspected.

2nd. Rhonchi. Rales or Rattles, The term Rhonchi

Rhonchi signifying a snoring or snoring is used to designate certain morbid sounds which occur in the lungs, some of which partake of this character. For practical purposes and ease of description they may be conveniently divided into dry and wet sounds. The dry are divided into the sonorous and sibilant. Rhonchi And the humid or wet sounds into the crepitant, and subcrepitant, or fine and coarse crepitation and gurgling.

The sibilant and sonorous rhonchi, although different in character are produced by the same condition of different parts, the sonorous in the larger tubes and the sibilus in the smaller tubes and vesicles. In the incipiency of inflammation of the mucous membranes, when the natural secretion is diminished and viscid in character and the membranes thickened thus and diminishing the calibre of the tubes, the entrance of air through these comparatively dry and constricted passages, produces the sonorous and in the vesicles the sibilant Rhonchus

These conditions of sonorous and sibilant rhonchus are heard, especially the latter in the incipient stages of inflammation of the lining membrane as occurs in Catarrh and Bronchitis and in Asthmatic and emphysematous lungs under incipient inflammation.
The humid or wet sounds the smaller & larger crepitation are produced in the smaller and larger tubes and vessels when under the second stage of inflammation when there is an increased amount of liquid effusion, the passage of air through the liquid in respiration produces the crepitation corresponding to the size of the vessels or tubes. The first kind of crepitation that produced during inspiration in the minute air vesicles giving a sound like the crumpling of a bank note or the burning salt. And is an almost pathognomonic indication of the existence of inflammation in the lungs.
The larger kind may occur at the same time

time or may exist without the former as in bronchites and Catarrh.

Gurgling, is a term applied to that degree of crepitation which can only be produced by a cavity larger than the bronchi and containing liquid, the air then bubbling through the liquid transmits to the ear the gurgling sound.

This sound differs in no respect from the preceding sounds in nature its peculiarity depending solely on the size of the cavity producing it.

It is sometimes termed cavernous Rhonchus and generally accompanies cavernous respiration

The cavities as before stated commonly depend on the previous existence of tubercles, but not necessarily

The second division of the subject of Auscultation less important than the former comprises the auscultation of of the voice. In the healthy condition of the lungs the ear applied to the chest while the patient speaks gives no distinct articulation through the chest. But in many of the diseased

diseased conditions of these parts it may be heard more or less distinctly, and the degrees of distinctness are designated by the various terms of; Increased vocal resonance, Bronchial voice or bronchophony, Aegophony, the Cavernous voice and the Amphoric voice,

The increase of vocal resonance is in degree between the natural sound and Bronchophony it is heard in any condition which partially solidifies the vesicular structure making a better medium for the transmission of sounds, It almost always exists in the first stage of pneumonia or in partial solidification from tubercles

The Bronchial voice or Bronchophony is a sound greater in degree than the former, is more permanent, and usually accompanied with bronchial respiration. It occurs principally in the same diseased conditions of the former and indicates a greater degree of induration in the pulmonary structure. It

It frequently occurs also in pleurisy where there there is effusion. But the sound of this division which is most peculiar and indicative of pleuritic effusion is Aegophony. from (αιγος and φωνη) This sound, compared to the bleating of a goat, of a bronchous, cracked and nasal character is produced by the sound of the patients voice at a certain stage of effusion. A certain amount of liquid in the pleural cavity is always necessary to produce this sound, and that is about one third of the cavity. Above and below this amount of effusion it is not heard, but when it is heard it is pathognomic of the existence of liquid and is heard just about its surface.

Pectoriloquy. By pectoriloquy is understood that condition of the respiratory organs in which the voice of the patient passes as it were directly into the ear of the listener, enabling us to distinguish every articulation with certainty. It is seldom found in its purity, the conditions producing it being a large and superficial cavity containing

no liquid, this produces the most perfect sound but as it is most commonly heard it differs not much from the bronchophony before described. Amphoric voice corresponds with amphoric respiration, it is not an articulate sound but similar to that produced when speaking over the mouth of an open vessel partly filled with liquid. it has a metallic sound and commonly indicates the existence of pneumothorax or an exceedingly large cavity.

Another physical sign which it is difficult to classify sometimes occurs which is termed the metallic tinkling and is similar to the sound produced by the falling of grains of sand in a metallic a porcelain vessel. it is owing to the agitation of the contents of a cavity by the air, is of little value alone, but may assist occasionally in company the other signs to make proper distinctions.

The third, last, and least important of the divisions of auscultation is that pertaining to the cough.

When a healthy individual coughs, the sound heard by applying the ear to the chest is of an indistinct and confused character, combining some degree of resonance with the passage of the air into and from the Bronchi. But in disease it is heard very differently, and is divided into Tubal Cough, Cavernous Cough and Amphoric Cough. The Tubal Cough is heard when there is pure bronchial respiration and is dependent on the same causes and possesses its characters with a slight increase of violence and resonance

The Cavernous Cough, occurs when there is an empty cavity in the lungs communicating with the bronchi and is more distinct and significant than the former making one of the best signs of pulmonary Cavity. It coexists with cavernous voice and respiration.

Amphoric Cough, is heard in connection with amphoric respiration and voice and is with them perfectly distinctive of the presence of hydro-pneumothorax or of a large cavity

We have now passed briefly and imperfectly over the principal points for consideration in our subject, and although our essay has been prolonged beyond the original intent, still many points of interest have been treated of very hastily and others altogether omitted.
We do not presume that any thing new or of particular interest has been offered on the subject. This we are incapable of doing. Our only aim has been to state practical and well established truths, and explain the reasons for the occurrences of those facts. How far this has been accomplished is for a higher authority to decide. The errors which may be found to occur in what has been written (and doubtless there are many) are "attributable to the head and not to the heart" And in conclusion we would adopt the language of an older and more illustrious author, that! "What is writ, is writ
Would that it were worthier"

An

Inaugural Dissertation

on

Scarlatina

Submitted to the Examination of the Provost, Regents and Faculty of Physic, of the University of Maryland for the degree of Doctor of Medicine

By

Sam'l Mc. Bell

of Mississippi

Baltimore

March 6th 1850

Scarlet Fever

In Thesis Conforming with the rules of the Medical Department of the University of Maryland permit-me to offer by way of Thesis. a few remarks on the above named disease which is ravaging nearly every portion of these United States, often defying alike the skill of the most distinguished practitioner and the man of science. Indeed it could hardly be otherwise for the disease is often of a most malig-nant character. But our profession appears not only to be at fault, but directly at points, as to the treatment. Some regard it as an inflamatory disease while others treat it, as a low typhoid or irritative fever. Not only is this true as to the treatment, but as to the remote cause. This appears to be involved in darkness. Some think the cause

is direct Contagious or effluvia trans-
mitted from a diseased to a healthy body.
while others, regard it as dependent upon
some peculiar atmospheric change,
or admixture, such as generates Epidem-
ic diseases. Seasons and location are
appealed to, with a view to the illustra-
tion of this obscure point. It is known
to prevail more generally, as well as more
severely, in the damper seasons of Spring
and fall, and also in those locations
most subject to humid exhalations, and
of deficient ventilation, of such the
swampy bottom lands, of rivers, and
other sluggish running streams. The
vicinity of ponds, Mill dams, and in
large low lying cities, towns, and
villages, in and about factories, and in
prisons, and hospitals. In short, in
all such situations as Typhoid and low
bilious fevers are known to prevail.

and to predominate over inflamatory diseases, and yet this fatal malady is sometimes sun, on the highest and dryest ground. Even the mountain top, is not exempted. Hence it is sun, that an atmospheric cause, unaided by Specific contagion is not as fully sustained, as would at first sight appear. And again, as it is well established, that scarlet-fever, generally afflicts children; while the middle aged, an a[illegible] less frequently affected by it; and the aged almost entirely escape: the conclusion might be hastily drawn, that specific contagion, has no share in producing an attack; on all persons, of all ages, would be alike susceptible; But when it is recollected, that young persons are much more liable to attacks of disease, universally admitted, to be contagious; than the aged; the doctrine of contagion

is rather sustained, than otherwise. This unsettled state of so important a question, is very much to be regretted. Several weighty considerations, render it highly desirable, that all should be able to say most clearly, what the true causes of so formidable an enemy is, in order, that it should be met, on the proper ground. Nor have men of Science been backward in their efforts to settle the question conclusively. In Hospital practice, we have innoculations, resorted to with every appearance of a clear demonstration, that this disease, can be transferred in this way, at least, from person to person. It is not claimed however, that any thing of this sort came under my own observation. For although my opportunities for witnessing an extensive Hospital practice were very valuable during my pupilage in New Orleans, I am not aware of this experiment having

measels. That what he saw was
putrid Scarlet-fever; and that as he
did not distinguish between the two
affections. he called it Measels. Indeed,
Morton who confounded these diseases
wished the appellation Scarlet-fever
banished altogether. he conceived the
two diseases were but one and thought
it wrong to use both terms. Measels
being quite sufficient to distinguish
the whole disease. Bateman thinks
the year 1793 was the first in which an accurate
diagnosis was made Dr Withering published
an essay on Scarlet fever in 1788 of which essay
the second edition appeared in 1793 Dr Bate-
man thinks that the latter was the
Correct date of the first division
of the disease. this appears to us strangely
defective diagnosis. Scarlet-fever is not mentioned
by the Arabians nor the Greek writers
It is supposed to have broken out / for the

been successfully tried Nor has any thing occured in my practice in Mississippi illustrating conclu-sively the nature of the remote cause.-
The practice in Scarlet fever which fell to me in that warm and humed region. showed the disease to be one of low action frequen-tly requiring of tonic remedies

Diagnostics Symptoms. It appears that it was not untill the close of the eighteenth century that this disease was distinguished from measels. Morton a contemporary of Sydenham thought that they were varieties of the same disease, Sinnertus asks. why the disease is sometimes small pox. and sometimes measels and Deembroeck who published in 1687 asserts that measels & small pox differ only in degree In 1769 Sir William Watson did not distinguish measels from Scarlet fever. on this account some have affirmed Sir William did not see the putred form of

first time in Europe) in Spain in 1610. Willan says it was known to the Neapolitans before 1500 under the name rossalia or rossania, and that Ingrassia describes it under that name: and others, call it, rosalia, robilia, rubiola, rubiolae and rubeoli (from robia madder. and morbillis measels): and that the French use all these words for Scarlatina and in addition even rugeole turning measels sempion. The word Scarlatina was formerly Scarlattina and is derived from Scarlatti a red cloth. The usual symptoms of Pyrexia. For two days. the fever is very high the pulse rapid, and the surface hot accompanied by nausea and vomiting. On examining behind the ears, or under the chin in the crease of the neck at this stage the skin is apt to be unusually red. There may be tonsilitis and the inflammation extending to the soft parts

of the throat. Often on the surface of each tonsil a pale or ash coloured spot is to be seen which rapidly runs into ulceration. These symptoms are to be found in a majority of cases. In others. The scarlet rash may be entirely wanting throughout the disease and if scarlet fever is not prevailing there may be a great difference of opinion even among the best practitioners in regard to the true character of the disease. Delirium early in the disease is an unfavourable symptom. Children with very large heads. and short necks seem to be peculiarly liable to it More especially if the throat is much swollen. And later in the disease coma is not an uncommon symptom probably from the swelling of the neck producing pressure on the jugular veins and preventing the free return

of blood, from the head. In some cases during the progress of the fever, upon the red surface, little vesicles containing a thin colourless liquid, and resembling somewhat those produced by the external use of Croton Oil, may be seen. They are more common on the upper part of the trunk, than on any other part of the body.

The profession designate three varieties of this malady, Simple, Anginose, & Malignant, and some authors make four Classifications. There are various grades of the same disease, one child in a family, may be carried off by the pestilence in a day or two, or in a few hours, while another will be so slightly indisposed, as not willingly to lose a meal, or be confined to bed, though covered with the eruption.

Within combatting the idea of any specific difference among the aforesaid classes concludes with the proposition that all proceed from the same cause, because under the same roof, in large families some individuals have the disease in one form, and some in another, at the same time.

The temperament has much to do with this disease. And scrofulous children suffer more than others, probably, because they are more liable to glandular enlargements; the glands being so abundant about the throat. They are always ready to sympathize with any disease affecting that part.

Scarlet-fever when it invades localities frequented by ordinary epidemic diseases is likely to put on a formidable aspect. We are told by Forry, that in Rondout and its

neighborhood on the Hudson river where malignant fevers prevailed in the summer of 1843, Scarlet fever at the commencement of next winter spread widely, and put on a most pestilential, and fatal character. This he ascribes, plausibly enough to the lingering influence of that state of the air what ever it was; which produced the fatal fevers of the few months previous.

To make a good diagnosis, when measels and other eruptive diseases prevail at the same time. Sundry minute appearances, must be attended to, by the practitioner. The rash is of a most vivid red colour. While that of measels is of a darker or raspberry hue. In the former disease the fever does not abate upon the appearance of the eruption to the

same effect as it does in the latter.
The sequel of these two diseases also
differ materially. Scarlet fever is fre-
quently succeeded by anasarca, inflam-
mation of serious membranes, deposition
in the joints &c. Rosola is distinguished
from scarlet fever by the partial and
irregularly defined rash, by the absence
of angina, and febrile disorder and
by the short duration of the complaint.
Dark rose coloured patches exactly
like roseola sometimes intermixed
with the rash of scarlet fever but
this is not common —
Prognosis The Prognosis depends
mainly upon the type of the disease
and the treatment used.
Treatment. Generally speaking in
the simple form there is nothing neces-
sary. But in the two graver forms
however the patient should be carefully

prescribed for according to the indica-
-tions present, - some recommend
Cold ablution, while others use the
warm bath, and with more success.
Indeed it is a most valuable remedy
when used three or four times a day.
The skin being one of the great out-
-lets, by which the morbid poison
escapes. the best efforts should
be made to keep it in proper condi-
-tion. Bleeding is sometimes recom-
mended, but seems to be contra in-
dicated, except in cases of unusu-
-ally inflamatory character, and
even there local bleeding as by
Leeches may be resorted to with suf-
ficient depleting effect. In cases
where Leeches can not be obtained cups
on each side of the Thyroid Cartilage
might be substituted with advantage.
Stimulating poultices are highly

valuable topical applications
Blisters used with caution to be kept
on only an hour or two prior to poulticing
will be useful. To have the proper
effect they should be applied at
an early period. Gargles to the throat
are useful and are recommended
in great variety. Some recommend
astringent while others select the
formidable stimulants such as pepper
vinegar and salt. But the most
approved application to the throat
internally is nitrate of silver.
A sol of Chloride of Soda if not equal
to the nitrate of silver is one of the
best gargles heretofore used, when the
tongue is so much enlarged that
it is impossible to take any thing by
the mouth, the solution may be used
with a small syringe through the
nostrils. This causes a quantity

of lymph to be discharged from the throat. The chloride of soda is also a most valuable internal remedy. Several preparations of Bromine have been recommended by the best authorities. The most formidable are the muriate and the carbonate. The latter is peculiarly applicable to such cases as have a putrid, prostrating tendency, deficient urinary secretions and an excess of uric acid. This is a point of the highest importance, and should be steadily watched. The kidneys being one of the great emunctories by which the system is relieved of morbid matter. Hence it will be seen that to establish a regular functional action of these organs is next in importance to the attentions which should be paid to the skin. The

the stomach and bowels. In selecting remedies to act as emetics, cathartics diaphoretics, and diuretics care should be taken not to waste but rather to husband the strength of the patient; for it will require all his energy to throw off so much morbid matter, and assimilate sufficiently to restore a normal state of the blood, and different organs.

As to tonic remedies it often happens that persons afflicted with Scarlet-fever, are at the same time under malarious influences, and have intermittent paroxysms after the most prominent & malignant symptoms of Scarlet fever subside; And then the Sulph: of Quinine, comes in as a most valuable remedy, and in many cases of this disease, unattended by intermittent symptoms, this

remedy is highly useful. Regarding the skin as an important outlet of poison and morbific matter among other remedies "Inunctions" is spoken of favorably. Sequelæ – The different organs left in a weak and diseased condition will of course require appropriate remedies. The Eye, the Ear, the trachea, the joints the muscles the kidneys the stomach & bowels are liable to be left in a morbid state. The most formidable sequela is anasarca or general dropsy. This consequence requires to be met by appropriate remedies as promptly as the original malady, or, it will prove equally fatal. The way to ward off this is to use the warm bath freely during the progress of the primary attack. But if such a state of disease and peril has unfortunately

hon set up it is incombent upon
us to desire and apply appropriate
remedial agents. of such the warm
bath deserves together with the hydra-
gogues are sufficient in the general
Profalactics. The Belladonna recommen-
-ded many years since by Hannemann
seems to be the only agent which has
acquired character in respect of this
point. and even this is regarded by
some practitioners as partaking of uncer-
-tainty at least. My own experience
is decided by in its favor and when
occasion presents it shall certainly
be tryed again —

And now being about to take
leave of an Institution in which
my time for the last four months
has been most advantageously
spent; permit me to tender my most
earnest and heart-felt thanks, for

the polite and friendly attentions
which have been extended to me by
the professors who fill the chairs
of this University, with so much
honor to themselves, and advantage
to their pupils.

An

Inaugural Dissertation

on

ASCITES

Submitted to the Examination

of the

Provost, Regents & Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

By

Abraham P. Williard

of

Frederick County

Maryland

1850

Gentlemen.

In accordance with the established regulations of this Institution. It is requisite that each candidate for graduation, shall produce a thesis, upon some subject appertaining to the science of Medicine. I have therefore, very respectfully submitted, for your consideration, a few imperfect remarks, on the subject of auscultation. If in perusing them, You perceive that I am in error on any point. As my Worthy Teachers, of our noble science. I ask your instructions.

Z.

Auscultation

By this term is meant, the act of listening, by the direct or indirect, application of the ear, to the healthy or unhealthy body. In reflecting upon this subject, the first question which presents itself to the mind, would be to ask. What is the object of auscultation? In answer to this inquery. It may be defined, a correct appreciation of certain physiological as well as pathological phenomena produced by the movements of organs, themselves or else transmitted by them, from others in their immediate vicinity. The auscultator should first make himself familiar with the healthy or normal sounds, before investigating those of a diseased character. For this purpose he should select a healthy individual for his examination. After making himself perfectly acquainted, with each peculiar physiological sound he may then proceed to investigate diseases. First applying immediate auscultation, as it is the most simple and easely appreciated

of the two methods and seems to be an initiatory step to the use of the stethoscope. The part to be auscultated, should be entirely bare, or the interposition of a thin garment usually presents no obstacle to the transmission of sound, it also prevents the patient from taking cold, and unnecessary exposure of females, and prevents contagion in cases of uncleanliness. The position, should be such as is most convenient to the physician & patient. Most usually the patient assumes the dorsal decubitus, sits on a chair or stands erect. In auscultation of the anterior part of the chest, the arms hang by the side, and the face turned to the opposite shoulder of the side being examined, to prevent inhalation of the breath. In the examination of the posterior regions, the arms are crossed and the body bent forwards. In auscultation of the lateral regions they are clasped over the

cranium. The practitioner generally places himself on the side to be auscultated. But this not always the case, for instance in examining the sounds of the heart, It is sometimes more convenient to stand on the right side, generally speaking, he examines both sides of the Thoracic Cavity without changing his position. But if the results thus obtained be unsatisfactory, he should change his situation in regard to position. And ausculte successively the right and left sides. Whatever be his position, he should easily habituate himself to the use of either ear indifferently. Auscultation may be applied in two modes, immediate or mediate, that is by the direct application of the ear, or by the interposition of the Stethoscope. Lannec it seems attached too much importance to the use of this instrument. as the merits of auscultation are not peculiar to it, nor does it add anything to the two modes of investigation. The results

of examination being identically the same.
Whether the direct application of the ear or
the interposition of the stethascope be the
mode of investigation. It is not necessary
therefore to adopt either method exclusively,
as each has its advantages under certain
circumstances. The physician can perceive
sounds over a greater extent of surface by the
direct application of the ear, as all parts
of the head when applied to the surface
become conducting midia. But immediate
auscultation cannot agreeably and conve-
niently be a constant application.
In cases of females, feelings of delicacy
would prevent the physician from apply
ing his head to the anterior part of the
chest. In certain parts as the axilla, supra
and sub-clavicular and the supra Spinous
regions and the groin. The ear is inconveni
-ently applied with accuracy. There are
persons who are dirty and covered with

perspiration &c, which make immediate auscultation disagreeable to the physician But as I have said, this is in a great measure obviated by interposing a tacuel between the ear and patient. Immediate auscultation is convenient in being always at hand. While mediate has the advantage of being applicable where immediate can with difficulty be practiced, paints out circumscribed phenomena, and reveals limits with more precision, the same however may be accomplished by an experienced ear. But both modes of exploration have their advantages, and should be practiced alternately, by those who seek to establish the most accurate diagnosis, And fulfil with prudence dexterity, the therapeutical indications of each particular case. The choice between the two different modes varys according to the case. The stethascope is inapplicable to children whose cries

alarmed at its application. It is preferred in cases of females. In males it is a matter of little consequence which mode be adopted. In auscultating the posterior region of the Thorax, the ear is more accurately adapted, while the anterior scarcely presents any advantages for either method. In depressed regions the stethoscope is used exclusively, it is also used alone in auscultating certain organs such as the Larynx, Trachea and abdominal aorta. In ascertaining the nature of sounds, the stethoscope has the advantage in those cases which are circumscribed as in pulmonary congestion. The ear in such as present a great extent of surface as bronchitis. It helps best for me to enter into a discription of the various modifications of the stethoscope as many of them are not in use at the present day. I shall therefore confine myself to a discription of Dennison Pressy's substitute for the original cylinder.

This consists of a hollow cylinder generally made of cedar about six to seven inches long, by two at its base of a narrower diameter in the superior three fourths and terminating above by a round plate of ivory perpendicular to its axis upon which the ear may rest. This plate may however be of the same wood as the tube. Of all the modifications, this is the most frequently used and generally preferred by physicians. If in auscultating a part the immediate application of the ear be preferred, it should be accurately applied so as to follow the respiratory movements of the thorax, without friction of the surfaces in contact. If the stethoscope be preferred in making a physical examination it should be held as a pen and placed perpendicular upon the part to be examined, taking care to accurately adapt it to the surface in order to prevent the ingress of air between the integuments and stethoscope or between the latter and the ear. It should

be held firmly on the part, taking care not to press so hard as to give pain to the patient. Besides this, it is also an impediment to hearing and may increase dyspnoea in some cases. In auscultating a part, it should always be remembered that a comparison with the opposite one is to be made. It is by comparison alone that slight alterations are detected. Profound silence is necessary when auscultating a patient, and the physician after auscultating for a while should so collect his thoughts as to be perfectly isolated from the external world. Thus concentrating them upon the nature of sounds heard by the ear, thus by practice and investigation he may select from the healthy or morbid auscultation, those which require most attention. In practicing auscultation it is proper first, to investigate those physical phenomena which are most easily appreciated, for instance in examining the Thorax, the attention should first be

directed to its conformation, movements and increase or diminution of the resonance of its walls. It is a good plan before making the examination (when it can be done) to obtain as much information as possible from the patient, in relation to his disease, inquiring into the cause, seat of pain and duration of the disease. All of which will assist him in his examination, and avoid unnecessary fatigue on the part of the patient, as would probably occur in the application of the different methods of physical exploration. How shall the physician judge of the different sounds heard, on applying the ear to the chest? It can be readily seen that they may be produced by the functional exercise of different organs, such as those of the circulatory system, the different organs of respiration and those of the alimentary canal. Those of respiration may depend on cough, resonance of the voice or respiration alone. Those produced by the voice and cough are intimately connected with the

acts themselves and therefore easily recognised. Those produced by the oesophagus and stomach have a peculiar character and are a species of gurgling caused by the displacement of gas. For the purpose of distinguishing whether they belong to the circulatory or respiratory system the physician should ascertain if they occur sixty or eighty, or only sixteen to twenty times in a minute. But they may only occur at intervals, in such cases he should ascertain whether they are synchronous with the respiration of the chest or the pulsation of the radial artery. If they be connected with the act of respiration he should inquire in what respect they differ from the normal respiratory murmur or whether they constitute those of an abnormal character known by the name of rhonchi. Lastly whether they occur in inspiration or expiration. The physician should not however establish his diagnosis from a single auscultatory fact. But endeavor to investigate the shades of dif-

-ference, intensity, seat and extent of the sounds. And finally take into consideration all the physiological and pathological conditions, relating to each case. Thus by comparison of the different elements, he may establish a correct diagnosis.

Having now discribed some of the rules and requirements, which are absolutely necessary for him, whose object it is to establish a correct diagnosis of disease, I shall next proceed to a consideration of a few of those physical signs, which occur in the human frame. The number being numerous, their nature in some cases being obscure, and my knowledge comparatively limited. I follow therefore, that I cannot in this narrow scope, enumerate all of them, nor can I advance any thing original. The heroes of medicine have kept the lamp of industry, constantly burning, and by their ever aspiring ambition, have surmounted the rugged paths of med-

-ical science with a penetrating mind, and observ-
-ing eye. Little or nothing consequently remains
unnoticed. I can therefore only speak of what
these great Spirits have already spoken. And
by industry, experience and observation follow
their illustrious examples. But to return again
to my subject. On the application of the ear to
the chest of a healthy individual, during the
act of respiration, a gentle murmur is perceiv-
-ed, resembling somewhat that produced
by a person in the arms of sleep, or making
a deep sigh. This is the respiratory sound, or
vesicular murmur. This is composed of two dif-
-ferent sounds, both soft and distinct, that of
inspiration being more appreciable and lon-
-ger than expiration. The respiratory murmur
is heard stronger in those parts, which present
the greatest bulk or thickness of the lung, and
more nude towards the root of the bronchial
tubes. It is equal in corresponding points
on both sides of the chest. Generally however

more intense, at the summit of the right lung. It is also more audible, when the respiration is deep and increased in frequency. It is also louder in children. It is generally feeble in old persons. It is more intense, if the formation of the chest be large, and its walls thin. Alterations of the respiratory murmur. First alteration of intensity. Thus considered, respiration may be strong, feeble or absent. Strong or puerile respiration. This consists of more intensity than in the natural condition but not changed in character. It signifies less a lesion of the organ where heard, than disease of more or less distant portion, the healthy part making up for the inaction of that affected. Feeble respiration, this is characterised by a diminution in the normal strenght of the murmur. It sometimes retains its natural softness, and at others again, becomes somewhat changed or more rude, than natural. It

is caused by some impediment to the transmission of sound, or some functional alteration. In the first instance, it may be owing to pleuritic effusions, the deposition of false membrane upon the pleura or the interposition of tumours, between the lung, and the posterior surface of the anterior parietes of the chest, causing retrocession of the former. The second may be caused by obstruction or contraction of one or more of the bronchial ramifications, from the presents of foreign substances, producing obstruction or diminution in their calibre &c. The diseases characterized most frequently, by feeble respiration are tubercular deposition, pulmonary emphysema, and effusions into the pleural cavity. Feebleness of the vesicular murmur, with increased resonance indicate the presents of emphysema. Feebleness of the respiratory murmur with dullness on percussion, the inference is tubercles or pleuritic effusion. If the dullness be confined,

to the summit of the lung, there are most probably tubercles, if circumscribed and near the base, rather pleuretic effusion. Absent respiration depends upon the same conditions of alteration as feeble respiration, and hence announces the same diseases, with more decided anatomical lesion.

Alteration of Rhythm

This may be slow, frequent or jerking. Slow respiration gives existence of some affection of the brain or spinal marrow. Frequent respiration indicates some disease of the thoracic or abdominal viscera. Jerking respiration may be caused by spasmodic constriction, tubercular deposition, chronic pleurisy with adhesions, &c. Sometimes the respiration is long, sometimes short, finally there may be prolonged expiration, which causes the respiratory sound to be always more rude. Of the different alterations, that of expiration seems to be the only

one of much importance as a diagnostic sign. And this may be confined, to two diseases, pulmonary emphysema and incipient phthisis. And in some cases, is the only diagnostic sign of phthisis.

Alteration of character.

Harsh respiration.

This variety presents different degrees of intensity, as hardness, dryness, and there may occur both in inspiration or expiration, or in one alone. It may be observed in any disease which causes pulmonary induration but occurs most frequently in emphysema and. Roughness, with dryness, unnatural prominence, and increased resonance of the thorax, indicate emphysema. If it be accompanied by prolonged expiration, resonance of the voice, dullness on percussion, and confined to the summit of the chest, the physician may be certain of the existance of crude tubercles. Bronchial or tubal respiration.

It is distinguished by an increase in intensity and an elevation of tone, it may be well imitated by blowing through the hand, rounded into the form of a tube. It differs, but little from harsh respiration, being only an exaggeration of it. Its tubal quality serves to distinguish it from cavernous respiration, which has, most generally, a peculiar hollow sound. It may be heard in a great many affections of the pleura, bronchi and lungs. It is most frequently heard, however in phthisis pulmonalis, pleurisy, and the inflammatory hepatization of pneumonia. If it be slightly marked, supervening, during the course of some chronic affection, and confined to the summit of the chest, it may be caused by the presence of crude tubercles, in the parenchyma of the lungs. If the souffle be more intense, and observed in some acute affection of the chest, the physician may suspect pleurisy or pneumonia. If it be neither in proportion

to intensity, nor extent of dullness of the chest it is rather an indication of pleuretic effusion. If on the contrary, it is intense, decidedly tubal, and perceived over the whole extent of dullness, then is evidence of the existance of hepatization.

Cavernous respiration.

A blowing sound, well resembled, by blowing through a hollow vessel, or by fixing both hands, in such a manner as to form a cavity and breathing through them with violence. Its most common seat is the summit of the lung. It announces either dilatation of a bronchius, or the existance of a cavity. The rarity of the former compared with the frequency of the latter, make it very probable, that, in nine cases out of ten, it is an indication of a cavity, which is the consequence of softening tubercles.

Amphoric respiration. This has a metallic quality, and may be well represented by blowing into a large pitcher. It is generally accompanied by metallic tinkling. When well marked

, it almost always indicates pneumothorax with pulmonary fistula. When not so well defined, it may announce the same disease or a large cavity. Alteration by abnormal sounds. These are the rhonchi and friction sounds. In the healthy state, the two reflections of the pleura, glide silently and smoothly one upon the other, during the physiological movements of the lungs. But in case of certain pathological conditions, a perceptible noise is heard, resembling somewhat a number of successive crackings, and of a jerking character. To produce this sound, it is necessary that the two surfaces of the pleura, or one of them at least should present asperities, and glide one over the other in the elevation and depression of the ribs. The roughness is owing almost always to the deposition of false membrane. The friction sounds are observed in pleurisy, tubercles of the pleura, without adhesions, and very nearly in pulmonary emphysema

But they most frequently indicate a pleurisy which is improving. If perceived exclusively at the summit of the chest, there is probably tubercular pleurisy. 7th Rhonchi. These are the abnormal sounds, formed by the passage of air through the air-passages, becoming mingled with the respiratory murmur, either obscuring or entirely replacing it. They are divided into dry and humid. The dry variety consists of varying tones, arising from certain unnatural conditions of the bronchial tubes. The humid are bubbling and produced by the passage of air through liquid. The dry are sonorous and sibilant rales. Which are heard in inflammatory conditions of the bronchi, especially in the early stage the secretions being suppressed, and mucous membranes swollen, producing a diminution in the size of the bronchi. 8th Mucous rales. These are the crepitant, subcrepitant and cavernous. 9th crepitant gives to the ear a sensation of fine dry-crackling sound, resembling the decrepitation of salt, which is thrown on the

coals, or the rubbing of a lock of hair between the thumb and fore-finger, while held near the ear. The bubbling sound is only perceived in inspiration, and generally observed, at the posterior and inferior part of the chest. It is heard in pneumonia and certain congestions of the lungs, but more frequently in pneumonia at the period of engorgement. 4th The subcrepitant rale. This is compared by some, to the sound produced by blowing through a pipe, into soap-suds. It is heard both in inspiration and expiration. Its situation is the same as that of the crepitant. It is observed in a great number of diseases, such as the second stage of bronchitis, it is also heard in phthisis and different catarrhs of the mucous membrane of the air passages. It is most frequently heard however in bronchitis, and phthisis, with softening tubercles, of the latter. 5th Cavernous rale. This is a gurgling sound, caused by bubbles of a large and irregular size, there combined

with cavernous respiration, giving it its distinctive character. It is heard both in inspiration and expiration. It is usually heard at the summit of the lungs. It announces either the presence of a cavity in the lungs or elliptical dilatation.

An

Inaugural Dissertation on

Prolapsus Uteri

Submitted to the examination of the

Provost, Regents, and Faculty of Physic,

of the

University of Maryland,

for the

Degree of Doctor of Medicine,

by

Franklin Mass

of

Maryland.

1850.

Prolongue Ulcers

Gentlemen, The subject that I have selected for my Thesis. is one of frequent occurence in the female. and its causes are to be met with so often, that a knowledge of the causes and treatment of this distressing complaint is of great importance to the Practicioner of Medicine.

The Organ in which this disease is seated seems to be peculiarly liable to various kinds of Complaints, all causing the patient a great deal of distress. The Uterus, "to give a brief discription of it", is of a pyriform shape having the base directed upwards and forwards, and the apex downwards and backwards, in the line of the axis of the inlet of the pelvis and forming a considerable angle with the Vagina. Convex on its posterior surface and somewhat flattened upon its anterior aspect unimpregnated it is about three inches in length, two in breadth and one in thickness

It is divided into fundus, body and cervix, in the unimpregnated state. it projects into the vagina about half or three quarters of an inch. In virgins. the uterus weighs from seven to eight drachms. but the weight increases after child-bearing to an ounce and a half. The ligaments of the uterus are, the broad and round, the broad ligaments are formed by a duplicature of peritoneum, which incloses the fundus and body and are connected with the sides of the pelvis. the round ligaments give the uterus additional support. theese are two muscular and fibrous cords, situated between the layers of the broad ligaments and extending from the uper angles of the uterus and along the spermatic canals to the labia magora in which they are lost. Now, having discribed the uterus. with the position it occupies in health, we will go on the examination of it in the prolapsed state. with the means usually recommended for the relief or cure of the complaint. Doctor Dewees; after that of "Gardien", makes

three degrees of "Prolapsus Uteri."
First, relaxation of the uterus, Second descent or falling of the uterus, Third, the precipitation of the uterus, And although these are only different degrees of the same affection, they require a little difference in the mode of treatment. In the first degree the inconveniences arise from the increased size of the uterus, and are confin=ed to a disagreable dragging towards the groins and umbilicus, in the second degree the woman complains of a sensation of weight about the fundament and a dragging about the groins, back and umbilicus which are more severe than in the first degree and are augmented when the woman is on her feet or walks, if a horizontal position be observed for some time it always affords relief, and the woman every morning would think herself cured did she not know, by experience all those symptoms would return after excercise or standing, in the third degree, the uterus

becomes engaged, more or less in the os externum, and sometimes even escapes from the vulva. In this case, it draws the vagina with it, which turns upon itself, and all the symptoms just enumerated are increased, the woman feels a nisus, or bearing down effort at the anus and neck of the bladder, in consequence of the uterus being engaged in the external parts, thereby compressing the rectum and bladder. But if the uterus escape through the external parts, the symptoms last mentioned are less severe, or are found to moderate, when this takes place, but the pain in the back, and dragging about the groins increase, in consequence of the fundus of the uterus being still lower.

Of the many casualities, to which the uterus is liable, the prolapsus may be considered as the most frequent and troublesome. And this displacement may take place at almost any period of life. The principal causes

are, falls, blows, delivery. fluor-albus &c.
Fluor albus, may be looked upon as one of the most frequent causes, it relaxes the vagina and makes it yield to the superincumbent uterus or to the impulse of the abdominal visc-era,

Duparcque, in his treatise on the diseases of the Uterus, mentions a case of prolapsus caused by Chronic engorgement of the neck of the Uterus, which I give, as follows.
Madame H.. aged 30 years, of a small stature but very muscular. had prolapsus uteri, commencing three and a half years since when she was delivered of her second child, she attributed her indisposition to the circumstance of her having carried some furniture very soon after delivery. since then she felt painful draggings in the loins, and stomach, heaviness upon the rectum, and the approaches of her husband have been very painful to her. The catamenia were gradually reduced to nothing

the mid-wife who had accouched her recommended a pessary, which she could not wear. in consequence of the violent pains its presence produced in the loins. In the meantime by the advice of M. Dupuytren, she replaced it, but she was soon obliged to withdraw it again many attempts having been unsuccessful she bore her disease in patience. But the suffering and constraint which she experienced, the impossibility of raising any heavy body, and the inability even to make her bed as customary, induced her to revisit M. Dupuytren. who advised the repetition of the pessary, or a state of pregnancy The attempts to procure the latter object having greatly augmented the inconveniences, I was requested, 11th of July 1818. to place a pessary. thinking I had the address to do so, without causing suffering. but the state in which I found the cervix uteri prevented me from complying with the wishes of the patient. the part was very much tumefied. very sensible to the touch.

I thought that the disturbances which the patient experienced and the prolapsus itself, might depend upon this engorgement. I immediately confined the patient to her bed, and advised her to keep it for a month at least. I directed her to be bled from the arm every eight days to the amount of eight ounces each time. She was subjected to a soft and moderate regimen. At the end of four days, the uterus returned to its natural place, when I prescribed emollient injections and baths every 2 days, every four or five days, the patient took a spoonful of Castor Oil which was sufficient to excite two or three operations and overcome the constipation which had troubled her. Two days after I had commenced the treatment she menstruated, though in much less amount than usual, at the next period the discharge was much more abundant, but continued only for one day. The cervix uteri had diminished one third, and was pliable. She was bled twice about this time. At the third period, the cervix, which had almost returned to its ordinary form

and volume, became tumefied, in the meantime the sanguineous discharge continued all day. (September 7th") in sufficient abundance, the next day eight ounces of blood were taken from the arm The patient, who had a good appetite, and who felt her strength renewed, left her bed contrary to my wishes. No accident however occurred, at the next period, the menses continued full two days, as much as at other Times, Finally, the fifth period, they did not appear, and the patient visited me, fearing a relapse. But the "touch" proved the cervix to be in a good condition, I suspected the commencement of pregnancy, which, in fact existed. Her accouchment took place at full term, and as easily as at the two preceding, but by way of precaution, I kept the patient in bed fifteen days, and I did not permit her to go out and attend to her business 'til after the expiration of six weeks. Gentlemen, my object in giving the full history of this case, is, to show the importance of tracing out, the cause

of disease, if we can. In this case, prolapsus of the uterus was known to exist. the pessary was introduced, and after occasioning severe pain, it was relinquished, to be attempted again, and after failing two or three times, the actual condition of the uterus was discovered. Chronic engorgement was found to exist, which, after being subdued by appropriate means, the other state of the organ "Prolapsus." was relieved and the patient cured. In looking over Churchills Midwifery, I find this passage in the Chapter on the treatment of Women in Child-bed,

By keeping the patient on her back, we may even remedy old displacements

A Lady had prolapsus uteri, after her second confinement, which lasted till she became again pregnant, this was mentioned to me when I was called to her in her third labour. I kept her unusually long in bed, and subsequently on a sofa, and the parts completely recovered their natural state, so that she suffered no more

from the displacement.

Professor Chew speaks of the Alum bath as a means of curing prolapsus. he says, that the female should be put into a hip bath of alum water, and allowed to remain in it for ten or fifteen minutes. This plan I suppose would answer best, when the prolapsus has resulted from the relaxed state of the organ, depending upon Fluor albus, or if it has been of recent origin, and we see the case early = after pushing the uterus gently back into its proper place, and then, use the bath, thus giving tone, by the stringency of the alum, to the uterus and surrounding organs concerned in the prolapsus,

Many and various have been the means employed for the cure of Prolapsus Uteri, some recommend the astringent injections, position, the pessary &c. The Pessary is a valuable agent for this disease Dr Dewees depends almost entirely upon this in conjunction with tonics, and his practice I prefer to all other means that I have yet

read, and I will conclude this essay, with his mode of introducing the pessary, and citing case the first, in his treatise on females,

A Pessary of proper construction is the only efficient remedy for this complaint, it should be as well fitted to the parts as the nature of things will permit, for much depends upon its proper adjustment. The one I prefer may be considered as a modification of the circular elastic gum pessary, or rather that of Leveret, I made the alteration many years ago, and I have every reason to be satisfied with it. It is formed of silver strongly gilt, it is hollow, and pierced with a central hole of only sufficient size to permit the escape of the discharges incident to the parts, There are three different sizes. The medium size is most frequently required, The difference in size is only one eighth of an inch, either in addition or in reduction. When this is to be placed, care should be taken that the bowels of the patient shall have been freely opened, and the urine passed, and also,

that she should have kept her bed, for an hour or two previously to the Operation. She must be placed in a horizontal position on the bed, and near its edge = the parts lubricated, as well as the instrument with hog's lard. The labia must be separated by a couple of fingers. One placed on each labium, and the pessary then placed gently, but firmly, against the os externum, directing the force downwards, towards the internal surface of the perineaum and backwards in the direction of the vagina but, in such a manner, as shall make the introduced edge look towards one of the sacro-iliac junctions. (It will generally be found most convenient for the Operator to have the right side of his patient next to him, as in this position he will command the introduction of the pessary with his right-hand) We continue to press the instrument forwards in the course just pointed out, until the whole of it is received into the vagina, then the fingers must give it a transverse direction, or, in other words, the breadth of the pessary must corresp-

=nd with the small diamater of the inferior strait; this is easily effected. and we can judge whether it be well placed. by feeling for the hole in its centre. which must always correspond with the axis of the os externum or vagina. We must next ascertain whether the neck of the uterus is placed in the excava-=tion, this may be known by passing the finger over the edge. which is under the symphysis pubis. and depressing it a little. the finger will then readily detect the position of the neck of the uterus. The proper size of the instrument is of great importance If it be too large. it will give pain. and if it be too small, it will be lost in the first effort to go to stool we must obviate theese objections by introducing a different sized one. The relief in many instances is immediate. but if not it is almost always secured in a short time. It may be proper to rem-ark that the pessary will do no good. if the perin-eaum has been destroyed by laceration.

Before I employ the pessary. I almost always. when the time can be commanded. make use

of astringent injections, for two or three days or even weeks, with very decided advantage. the best perhaps is a solution of alum in the proportion of a half ounce of alum to a pint of water, and after the instrument is adjusted, a few syringes full of fine soap and water should be thrown up the vagina daily. if the gilt pessary be employed it will need removal but very rarely, not oftener than once in two or three months. The period it must be worn, depends upon, the inveteracy of the disease, the extent of the displacement, the employment of the patient, the greater or less disposition to fluor albus. As a general rule with young women, where the complaint has not been of long standing - from three to four months will be sufficient, but will require a longer time when the woman is more aged, and when the complaint is of long standing. Dr Dewees attaches considerable importance to a pain felt in the side, as regards the diagnosis of prolapsus, and notwithstanding the

the remedies employed against it. still remains until the prolapsus is relieved, as he gives a good description of it in his case 1st. I have transcribed it entire, which is, as follows.

Mrs. G——. aged thirty years, applied for my advice, for a severe pain in the left side, immediately under the margin of the false ribs, extending to the spine of the ileum of the same side She informed me, she had had this for several years with more or less severity, and, for which she had undergone severe medical treatment, such as, bleeding, purging, blistering, leeching &c. without the slightest benefit. The pain was not increased by respiration, pressure or motion, but some relief was constantly experienced upon lying down, and especially as the night advanced She could lie in any position without any increase of inconvenience, but felt most comfortable in a bent posture. I prescribed for her a variety of medicines with no better success, than those who had preceded

me, and began seriously to despair of being of any use to her, when thinking the leucorrhoea with which she was severely afflicted, might have some agency in weakening her, and believing this from the description of her feelings, to arrise from a prolapsed uterus, I mentioned my suspicions to her, and stated the propriety of an examination to ascertain the fact. To this she submitted, and the uterus was found low in the vagina.

I ordered her astringent injections, which were persevered in for three weeks, with as much advantage as I had contemplated, for the only benefit I expected from them, was to give a temporary tone to the vagina, before I should introduce a pessary. At the end of three weeks, I introduced a gilt pessary, and desired my patient to place herself upon her feet this she did, and declared she felt much more comfortable than she was wont to do, when she arose from her bed, and observed, that for the first time, for several years, she was free from the pain in the side,

Believing this to be accidental, I paid but little attention to the declaration at the moment, but upon my visiting her the next day she assured me she had no return of it whatever, nor has she had to this moment.

This case made a strong impression upon me especially, as I could call to mind several similar instances of affections of the side, in which I had failed to give relief, and it made me determine, should another case of painful side occur to inquire immediately into the state of the Uterus. It was not long before this oportunity presented itself to the Doctor, with the same happy result as the case just mentioned.

Gentlemen, I have now concluded this imperfect essay - and that it may meet the approbation of your honours, is the earnest wish of -

The Author.

An
Inaugural Dissertation
On
Tracheitis,
Submitted to the examination,
Of the
Provost, Regents and Faculty of Physic,
Of the
University of Maryland.
For the degree
Of
Doctor of Medicine,
by
Joseph H. Carley
of Anne Arundel County
Maryland.
1850

Synonyms. — Cynanche Trachealis, Trachei-tis. — True Croup. —

Nosologists have from time to time, given to this disease a variety of names as Cynanche laryngea, Cy. Stridula, Angina polyposa &c &c, but those by which, at the present day it is most generally known, are Cynanche trachealis, Tracheitis, and true or primary Croup, to which however, some have offered objections, on account of its liability in a great majority of cases to attack the larynx, equally with the trachea.

Dr Cheyne prefers Croup to all other appellations, as it does not convey an erroneous impression of the true character of the disease, and says, "Cynanche trachealis, and Cynanche stridula ought no longer to be retained as nosological terms"

Dr. Watson, it was, if I mistake not, who remarked, that it matters not by what name we designate a disease, provided

we have a true knowledge of all the phenomena attending such disease, and are enabled thereby to form a correct diagnosis, pursue the proper mode of treatment and bring the case to a happy or successful termination.-

True or Primary Croup, is a disease affecting the mucous membrane, and sub mucous tissue of the larynx and trachea, and sometimes extending into the bronchi and their ramifications, of a highly inflammatory nature, characterized by a deposition of false or adventitious membrane, generally of short duration, and very palpable in its tendencies, unless promptly and vigorously met by those means which experience has taught us are the most appropriate to combat the Symptoms, mitigate the paroxysms, and finally to completely subdue the disease.

This disease is almost entirely confined to the period of childhood and may occur at any time from the first or second months of life, up to the age of puberty, and some cases are recorded in

which it appeared as late in life as the twenty first year -

Dr Watson mentions a case, in which all the symptoms of a well marked attacks of croup occured in a female patient of his who was in her nineteenth year. The youngest children are reared and raised or fed by hand the more obnoxious they are to the disease. Statistics show that children in the first year of life are comparatively exempt from this affection, while during the second year we have it most frequently, from which time the tendency to be affected by it gradually decreases. May not the comparative immunity from the disease during the first year, be attributable in a measure, to the greater care generally taken with infants of this tender age, they being rarely exposed to the exciting causes of the disease; and the greater frequency during the second year, in like manner be attributable to their more frequent exposure, from being able to run about, and their sensibility remaining nearly if not quite the same to external impressions, and but ill calculated

culated to resist the influence of the various causes to which they are thus, much more frequently exposed? It seems to me, these circumstances may in part account for the great discrepancy in the occurrence of the disease in the first and second years. — Great caution is always necessary with a child, who has once had an attack of croup as it is apt to recur in such from a very slight cause, and the least hoarseness must be strictly attended to.

Some have supposed it to be hereditary but have failed to establish the fact, but its evident tendency to affect members of certain families, rather than those of others, has been clearly substantiated. Dr Cheyne thinks those families, "especially in which the children are of a sanguineous temperament and full habit, and much more liable to the disease than others. —

He also states that it often attacks children who have not finally recovered from a previous illness, which from its highly inflammatory character

and the weakened condition generally of children when just recovering from an attack of any moderately severe disease, I should think would almost invariably prove fatal.

Symptoms.

Croup may be considered into three stages viz. 1st that in which the Catarrhal Symptoms are present; 2nd in which the false membrane is formed and 3rd that of sinking or collapse. –

The disease is often preceded by the symptoms of an ordinary cold, constituting the Catarrhal stage, as slight feverishness cough and hoarseness, though, according to the experience of most observers, when the latter symptom is present we may in most instances expect an attack of croup, as hoarseness seldom accompanies a common catarrh of very young children.

Dr Cheyne calls particular attention to this point from having observed he says "that inflammatory affections of the mucous membrane of the larynx and bronchi in children owe their complexion to the mode of treatment adopted during the first six or eight hours",

This stage of the disease may last from a few hours, to two or three days, if not attended to, and on some slight exposure, may on the night of the day on which the child has been thus subjected to the exciting cause, become gradually worse until all the symptoms characteristic of the second stage have fairly developed themselves. More commonly however, the attack comes on suddenly after the patient has been for sometime in bed and probably asleep.-

The patient perhaps without awaking, if he should be asleep, gives a peculiar brassy ringing cough, which has been compared to the sound which would be produced by coughing through a brazen trumpet, but which, says D Wood "is in fact comparable to nothing else in nature, and to be appreciated only by being heard and when once heard will always afterwards be easily recognised"; before long this same single ringing cough is repeated again and again, and the patient is aroused when other symptoms show themselves.-

The voice becomes changed to hoarse, rough husky tones, there is shrill, stridulous, or sonorous

inspiration immediately following the cough closely resembling that of pertussis, or hooping cough, a crowing noise which together with the cough is said to be somewhat similar to the crowing of a young cock, or barking of a small dog, though Dr Wood thinks the resemblance not very obvious. The breathing which heretofore may have been quite natural, now ~~becomes~~ difficult and audible and rather slower than common, as though the extent of the passage through which the air passes has become enabled, owing perhaps to the contraction of the rima glottidis by thickening of its membrane. The fauces is in some instances slightly inflamed, and there is a little puffiness and swelling about the larynx. "The ringing cough, followed by crowing inspiration" says Dr Cheyne, "the breathing as if the air were drawn into the lungs by a piston; the flushed face; the suffused and bloodshot eyes; quick, hard and incompressible pulse; hot dry skin; thirst and high coloured urine, form a combination of symptoms which indicate the complete establishment of the disease".

Now these symptoms, constituting the second stage

of the disease, accordingly as the attack is going to terminate favourably or unfavourably, may gradually subside, without any thing or very little having been done to relieve them, and finally disappear altogether or as is more frequently the case go on increasing in intensity and lymph is thrown out, and the false membrane is formed; the cough, which up to this time may have retained its croupy sound, now becomes weak, the voice from being hoarse and husky sinks down to a whisper, in some instances scarcely audible; the throat becomes somewhat swollen and tender on pressure; fever still considerable, with quick frequent and sharp pulse; the face which is generally pale, during the fit of coughing becomes Cyanosed; there is spitting, or the escape of slightly bloody mucous or shreds of membrane from the lips; tongue loaded, with purplish edges; considerable thirst; the stools if any be passed are dark and offensive; pupils dilated, and Dr. Cheyne has observed a paleness of the iris compared to the healthy state; these symptoms continue until asphyxia comes on and the case generally

terminates fatally.

The average duration of an attack of this disease, is from three to four days, but it may prove fatal in twenty four hours or even earlier.- In favourable cases it is sometimes prolonged two or three weeks, the patient gradually expectorating the concretions of membrane which may have been formed,

Causes

Dr Cheyne is I believe, the only author who has drawn the particular attention of the profession to the peculiar condition of the respiratory organs as a predisposing cause of croup, he says "there would be less difficulty in explaining the predisposing cause of croup, did we know why the disease ceases at puberty.- The difference between the glottis of a child of three years and one of twelve is scarcely preceptible; whereas at puberty the aperture of the glottis is quickly enlarged, in the male in the proportion of ten to five, and in the female of seven to five; at the same time the bronchi enlarging, and the voice undergoing a corresponding

change. Upon the windpipe and bronchial system, changed in their constitution, enlarged and irritated, the occasional or exciting cause of croup is no longer able to produce an adequate impression:- It may be concluded, then, that in the immature state of the organs affected, we are to look for the predisposing cause of croup."—

The more plastic condition of the blood in children may also be considered as a strong predisposing cause of this affection.- Other writers enumerate cold moisture and dampness as the most frequent predisposing and exciting causes, and it is much more common in northern and temperate Latitudes, than between the tropics, and in the Winter and Spring months than at any other season of the year.

Diagnosis —

The catarrhal symptoms of measles have frequently been mistaken for the invasion of an attack of croup, but may generally be distinguished by the circumstances of the

of the case, as the prevalence of the former disease in the locality at the time, or the exposure of the patient to the contagion within two weeks of the threatened attack, and the characteristic eruption on the third or fourth day. - It has also been confounded with some varieties of cynanche; when the inflammation runs high in these diseases, it may affect the larynx, and give rise to croupy inspiration. - The great points of difference, are the appearance of the fauces, and the difficulty of swallowing in these diseases and their nearly entire absence in croup. - It has some points so very dissimilar from secondary or diphtheritic croup that by strict attention, I think the diagnosis of the one from the other can in every instance be clearly made out. - In the secondary form, the disease is preceded by the formation of the membrane in the larynx and of diphtheritic spots in fauces, attended sometimes with considerable febrile action, but always of a typhoid or adynamic type, while in tracheitis the fever is

is always of a sthenic or inflammatory character.

The breath also furnishes valuable information, being exceedingly fetid in the second and not at all affected in the primary variety.-

There is a spasmodic form of croup which may be distinguished principally by the slight febrile movement attending it in comparison to the fever attending the true disease as also by each succeeding paroxysm becoming less and less severe: but the great point of distinction, as I have said, is the existence of hypersea in the one and the absence of it in the other variety. Some suppose this disease to be essentially the same, differing only in the violence of the attack.-

Prognosis

From what has been said of this complaint above, it will readily be inferred that the prognosis in a majority of cases should be guardedly given, as it is impossible with any degree of certainty to predict, unless the case be a very mild one, is seen early, and the

constitution in a healthy condition at the time of the attack, that the disease will terminate happily; or if in a more advanced state there is a remission in the difficulty of breathing, and free expectoration while the patient still has a considerable degree of strength remaining, we may hope for the best:- And of course, when on the other hand, we see a disposition to a chronic or comatose state, with loss of febrile excitement; pale face with a blue or livid appearance of the lips and sunken, leaden hue of the eyes, together with feeble pulse cold extremities &c the case is almost if not quite hopeless.-

Dr Watson says "the mortality will differ according as the disease is detected early and treated vigorously or otherwise.- And with respect to treatments, there is no specific remedy for this, any more than for ~~any~~ other inflammations. We must first insist the general principles upon which the treatment of inflammations is founded: adapting them, however, to the malady in question by those

particular rules which the experience of the best observers has collected for our guidance." —
Pathological Anatomy teaches us, what from the character and severity of the symptoms, we would be prepared to expect. — False or adventitious membrane is found in all cases in some portion of the trachea, and almost as frequently in the larynx, hence the alteration of voice. — Sometimes the albuminous concretions, is almost entirely confined to the glottis, and frequently on the other hand it is found extending through all the branches of the bronchial tubes, which accounts for the state of complexion, the quickness of breathing and the croupy respiration, in the second stage even when the uneasiness in the throat has been relieved. —

Dr. Wood says he "has seen a case in which it lined the upper portions of the bronchia, the whole trachea and larynx, and the pharynx as low down as the oesophagus". — The membrane in some instances assumes the shape of the parts in which it is formed, but more frequently it is found in patches or shreds; — Evidence of inflammation

may generally be discovered over the whole of the mucous membrane of the lungs; the Cavity of the lungs is always full of fluid; the interstetial cells are sometimes filled with serum; or we may find part of the lungs hepatized, and inflammation to extend not only to the parenchyma of the organs but to the serous membrane covering them, in consequence of which we have fluid effused into the cavity of the pleura*. Sometimes the membrane in the larynx & trachea has been found detached, owing to the presence or intervention of mucous, which accounts for its being occasionally thrown or coughed up.——

Treatment.-

We come now to consider the treatment of croup.- In the first stage, before the disease fairly manifest itself, when there is nothing more than a very slight febrile action

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* Dr Cheyne, Cly. Pract. med- art. Croup p. 538.—

with cough and hoarseness present, general prophylactic, and simple remedial means, will perhaps be all that is required.- Confine the patient to a room of agreeable warmth, give him light farinaceous unstimulating diet, at the same time rub the throat with a little oil of turpentine, or Stokes' liniment, give a foot bath, to which it would be prudent to add a little salt of mustard; employ some simple nauseating expectorant as wine of antimony, or Syrup of squills; or the following mixture recommended by Professor Chew, ℞.

Vin Ipecac - ℥ij
Syr. Tolu - ℥ss
Mus. G. Acacia ℥j

of which give a teaspoonful every hour or two, according to the circumstances of the case; If it produces much sickness, the dose should be diminished;- At night, I think in addition to the above mentioned means, it would be

judicious to administer a purgative dose of calomel, followed in the morning with a little rhubarb and Magnesia or Castor oil.—

If notwithstanding these means the disease should go on to assume a more severe form, if the fever increases, the pulse become frequent, hard and incompressible, the face flushed, eyes suffused, with difficulty of respiration, a prompt emetic should be given without delay as ℥j of the wine of ipecac or wine of antimony at the same time blood should be taken from the arm, or as some recommend from the the jugular vein, to which however there are some serious objections, or if the child be very young we must trust entirely to local depletion, by cups to the back of neck, or leeches to the upper part of the Sternum; place the lower extremities of the patient in a warm mustard bath,— to act revulsively by withdrawing the current of blood from above downwards.— As soon as the emetic has acted freely, and as much blood, as is deemed necessary has

been taken, administer two grains of Calomel or compound nitrous powder every two hours, or as Dr Cheyne recommends, Calomel with James' powder from two to four grains of the former to two or three grains of the latter, and repeat every second or third hour, as the urgency of the case demands and if after three doses have been taken the bowels are not freely acted upon, a dose of castor oil should be exhibited to hasten their action.

The quantity of blood drawn should be from two to five ounces according to the impression made on the system by its abstraction. Dr Cheyne says under two years the quantity of blood taken should not exceed five ounces; Dr Watson thinks for a child of that age the quantity is large, and says, "upon an average a moderate bleeding will be produced by the application of a couple of leeches to an infant in its first year, and an additional leech may be employed for every additional year." The leeches should always be applied to the upper part of

the stomach and not directly to the throat from the inconvenience produced by the amount of pressure necessary to restrain the hemorhage from that region.

If after the prompt and vigorous application of the above mentioned means, we are unable to subdue the disease, and the cough loses its peculiar croupy sound, the voice becomes low and whispering, throat swollen and tender, face becomes of a mazard cyanosed, shreds of membrane or bloody mucous is expectorated, we have evidence of the formation of membrane, and our only hope is to promote the removal of the concretion, and for this purpose nothing with which we are acquainted is so efficacious as the tartrate of Antimony, in doses of from 1/4 to 3/4 of a grain every half hour until full vomiting is produced, and by keeping up the nauseating effect, and occasional vomiting by the administration of 1/6 of a grain every hour.

Blood-letting in this stage of the disease can do no good, but on the contrary may do a great deal of harm by the exhaustion it produces. Should the antimony in its uncombined state fail to produce the desired effect, it may be given in union with ipecac, as in the following formula R.

Tart. Antimon gr iv
Pulv. Ipecac ℈j
Muc G. Acacia ʒj ~~M~~

Of which ʒj may be given at a dose.

In addition to the Antimony or combination of Ipecac and Antimony, from four to six grains of Calomel should be administered, and followed by smaller doses every hour until ~~for~~ the bowels are freely acted upon: — these remedies however, thus actively used, in some cases, especially those of weak constitution or when the system is much debilitated by the previous active treatment, are apt to produce great exhaustion or sinking, which must be combatted as far as

possible by exhibiting stimulants as wine, brandy, or sal volatile in the internals, or by combining with the calomel or Antimony musk or Gum Camphor. The throat should be rubbed with hot oil of Turpentine. the Decoc. tion of senega & Syrup of squills may be useful -

℞. Dec Senegæ - ℥viij

Syp. Scillæ - ℥i ℈.

Or we may use the bi borate of soda - or other alkalies as ℞.

Vin Ipecac

Syp. Scillæ āā ℥i

Liq. Potassæ - ℥ij

Aquæ - ℥iv M.

Giving a tablespoonful at a dose as often as the urgency of the case demands. —

In the last stage, that of asphyxia or collapse when the pulse begins to fail the surface grows cold and the patient is gasping for breath our only hope, which is at best but a faint one, must be placed in stimulants and cordials: To give Ammonia, burnt brandy and Spirit fomentations

and small doses of calomel, ~~which~~ a minute portion of opium may be added if all we can do, and will in most instances prove abortive,

I should have mentioned, perhaps that the yellow sub sulphate of mercury or turpeth mineral has been recommended as a last resource in some cases, but from the great uncertainty of obtaining any benefit by its use and the extreme violence of its action we would hardly be justified in using it in any case.—

The operation of tracheotomy has I believe of late years, since the pathology of croup has become thoroughly understood, been generally abandoned, but as there are many cases on record of its having been successfully performed, I think, when we are fully satisfied that death is inevitable without it, the operation should be attempted.— In one hundred and fifty cases in which tracheotomy was performed by M. Trousseau and others thirty nine or nearly one in four of the

patients was saved:-

With regard to this operation Dr Watson says, "there seem to be just two predicaments, in which there is a chance that tracheotomy may be useful.- They are perhaps rare; yet they have been noticed by several observers.- The one is where the preternatural membrane, extends but a very little way down the trachea, and is confined chiefly to the larynx; and the other is where there is no preternatural membrane at all, or only a very slight coating in some part of the trachea, the impediment to the breathing having arisen mainly from the thickening of the mucous membrane. And you will observe, that an impediment from this cause will always be greatest at the narrowest part of the canal: and therefore incision of the windpipe in such a case may be expected to bring relief," and concludes his remarks on the subject by saying "unfortunately we cannot tell, before

death, to what degree, or extent the preter-
natural membrane exists. All that can
be said, I think, is that when the dyspnœa
and much croup comes on suddenly or
quickly, the disease is probably limited to the
larynx and upper part of the windpipe:
but that when the progress of the disorder is
slower, and the croupy symptoms are not so
well marked, it is more likely that a greater
extent of the trachea, below the larynx, par-
ticipates in the mischief. Our expectations of
success from tracheotomy will vary accordingly.— It affords a bad chance at the best, but
it affords also, in many cases, the only chance"